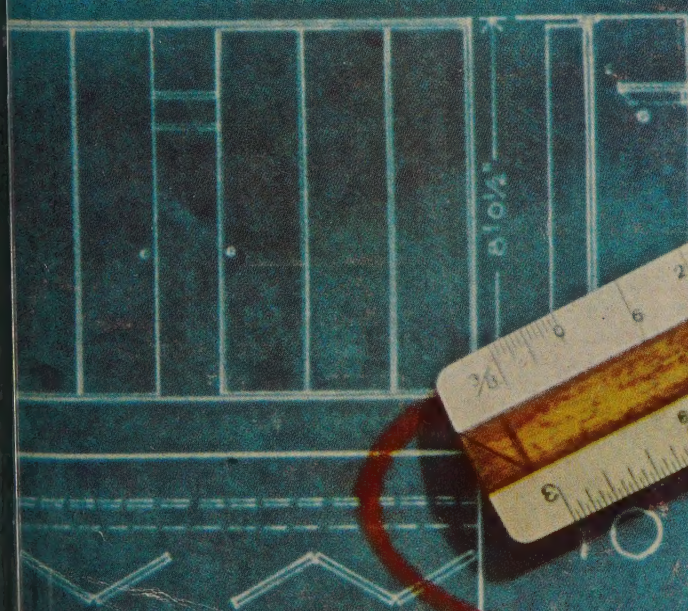
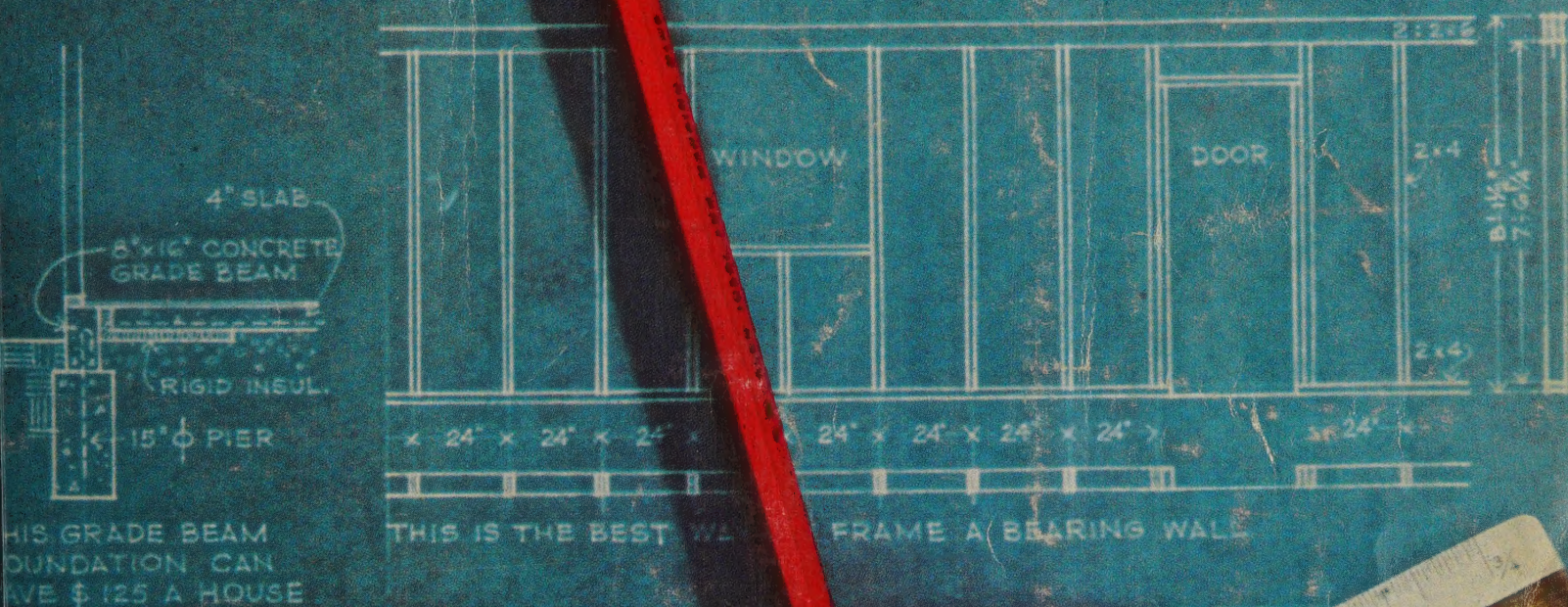
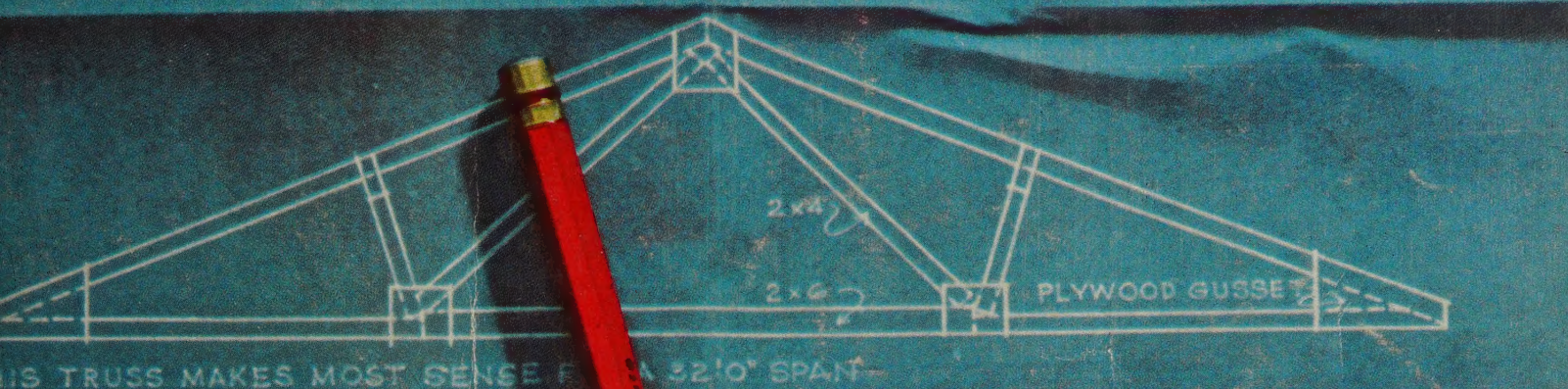


SEPTEMBER 1958 SIX DOLLARS A YEAR - ONE DOLLAR A COPY

# House & Home



HOW TO DESIGN  
AND DETAIL  
TO BUILD BETTER FOR LESS





Get rid of cooking odors, excess heat and grease . . with a NUTONE Built-In Range Hood-Fan and Oven Hood-Fan.



Clock & Chime



← Oven Hoodfan

Intercom  
-Radio

Food Center →



↑ NuTone Peninsula Hoodfan  
One of four different styles  
of NuTone Range Hoodfans



NuTone's Intercom keeps you in touch with your family all through the home. NuTone's Food Center saves work.

- 1 . . . FRESH, ODOR-FREE AIR IN THE KITCHEN WITH NUTONE'S BUILT-IN RANGE HOODFAN
- 2 . . . PROTECTION FOR CABINETS OVER OVEN WITH NUTONE'S BUILT-IN OVEN HOODFAN
- 3 . . . TIDY, UNCLUTTERED KITCHEN COUNTERS WITH NUTONE'S BUILT-IN FOOD CENTER
- 4 NUTONE'S INTERCOM-RADIO IS A "STEP SAVER" . . . PROVIDES RADIO-MUSIC THROUGH THE HOME
- 5 FRIENDLY MUSICAL GREETINGS AT THE DOOR . . WITH NUTONE'S DOOR CHIME AND CLOCK



Built-In Motor operates five food appliances



# NuTone

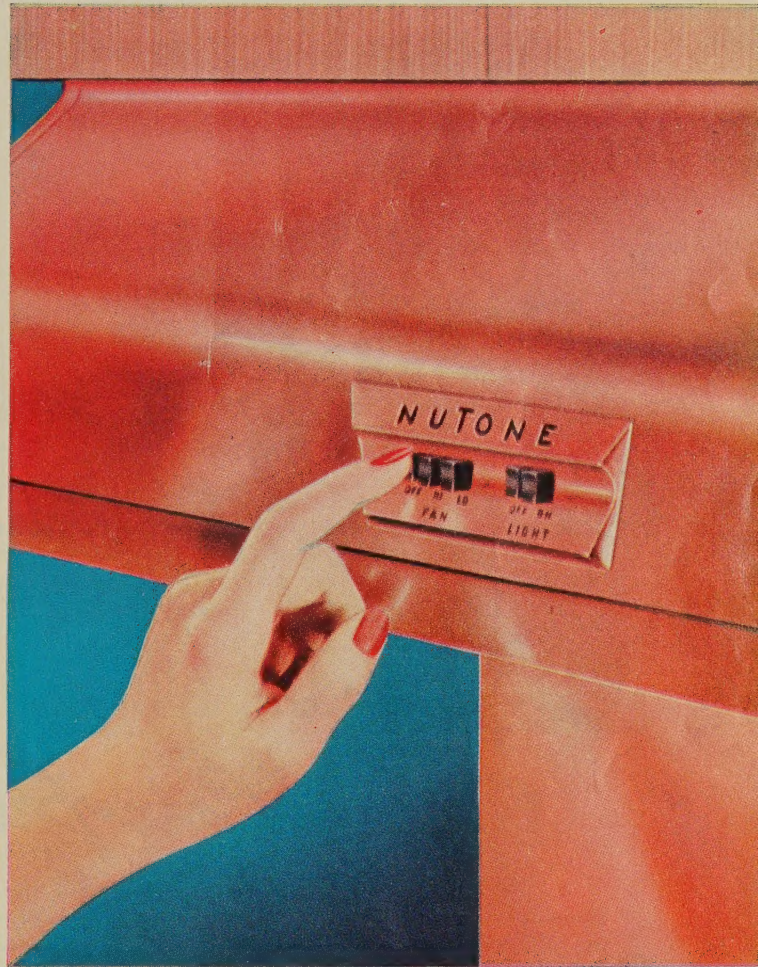
## *Kitchen Built-Ins*

AMERICA'S FINEST CABINET  
MANUFACTURERS INCLUDE  
NUTONE IN THEIR KITCHENS

No wonder NuTone Built-Ins have national acceptance by all the leaders of the kitchen cabinet industry. These manufacturers are convinced that NuTone adds value and splendor with 5 kitchen features every woman wants.

These famous names listed below now offer you cabinets with "cut-outs" for NuTone Built-Ins. Be sure to call your favorite cabinet manufacturer for full details . . . or write for complete catalogs and installation data.

 <b>Whirlpool</b>	 <i>Youngstown</i>	<b>Yorktowne</b>
 <i>i-XL</i>	<i>St. Charles</i>	<b>Mutschler</b>
<b>Geneva</b>	<i>Fashion Wood</i>	<b>NEVAMAR</b>
 <i>Copper Napoleon</i>	 <b>MENGEL</b>	<b>KITCHEN MAID</b>
 <i>Benson</i>	 <i>whitehall</i>	<b>THOMPSON &amp; HOLMES LTD.</b>
<b>de marco</b>	 <i>Quaker Maid</i>	 <b>SAWYER</b>
<i>Major Line</i>	<b>WOOD-MODE</b>	<b>GREGG</b>
<b>BILT-WELL</b>	 <b>b random</b>	<b>BRAMMER</b>



### Write for New Catalogs

NUTONE, INC. - Dept. HH-10 - Cincinnati 27, Ohio

NAME \_\_\_\_\_

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_





Heating and cooling equipment costs drop because aluminum-clad insulation retards heat flow to make smaller and less expensive units ample for all needs. Aluminum-clad insulation, recognized for quality, means extra sales appeal.



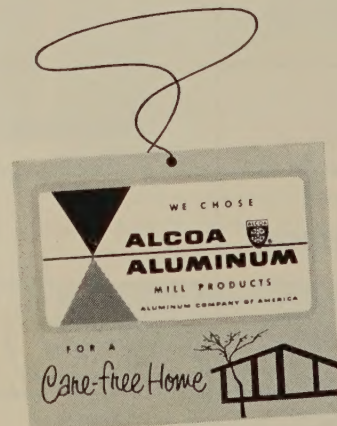
Lower heating and cooling bills, too, for aluminum-clad insulation bounces back furnace heat in winter and reflects scorching sun rays in summer to give home buyers a year-round bonus in comfort.

## Install aluminum-clad insulation ... sell *Care-free* living

When you install aluminum-clad insulation, you're saving money as well as adding the extra sales appeal of Care-free living. The savings are realized in smaller, less costly furnaces . . . the sales appeal in lower fuel bills for heating, air conditioning, or both.

The advantages, for you and for home buyers, both stem from the remarkable ability of aluminum-clad insulation to bounce back furnace heat in winter or solar heat in summer and to serve as a moistureproof barrier against vapor that condenses to rot framing and blister paint. So outstanding is the performance of aluminum-clad insulation that a 1,200-sq-ft house, properly engineered and fully insulated with aluminum-clad insulation can be heated and air-conditioned for as low as \$12 a month! Give homes you build the "comfort engineering" of complete aluminum-clad insulation; they sell faster and they cost you less.

Like all building products made of Alcoa® Aluminum, the best aluminum-clad insulation bears this Alcoa Care-free tag. Look for the Alcoa Care-free tag on aluminum-clad insulation you install. Aluminum Company of America, 1969-J Alcoa Building, Pittsburgh 19, Pennsylvania.



"ALCOA THEATRE" — Exciting Adventure, Alternate Monday Evenings



Selling Homes is much easier when ...  
**the Gas furnace cools in summer, too!**

*Now at new low cost for Builder and Buyer!*

DESIGNED BY ARCHITECT GEORGE NEMENY, A.I.A.

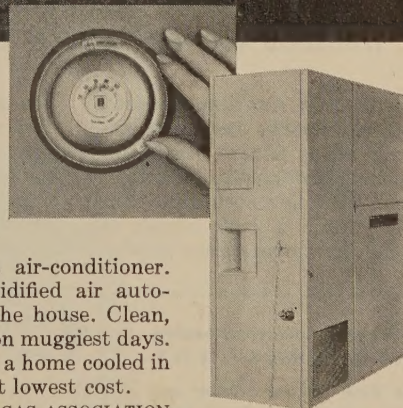



## **ARKLA-SERVEL SUN VALLEY\*** **All Year® Gas Air-Conditioner**

Show them a home that's heated in Winter by clean, silent Gas. Show them they can set a simple thermostat dial—and the Arkla-Servel Sun Valley\* circulates gentle warm air to every room. Tell prospects there's no worry about fuel deliveries either. Dependable Gas is piped right into the home. And both you and your buyer are protected by Arkla's five-year performance warranty. Choice of two models: the 3½-ton 500 and 5-ton 750.

Show them a home that's cooled in Summer by a simple change-over that turns the Gas furnace into a Gas air-conditioner. Dust-free, pollen-free, dehumidified air automatically circulates through the house. Clean, healthful, comfortable—even on muggiest days. With Sun Valley\*, offer buyers a home cooled in Summer, heated in Winter—at lowest cost.

AMERICAN GAS ASSOCIATION



**ONLY GAS**  **does so much more...for so much less!**

\*Trademark. Product of Arkla Air Conditioning Corp., Evansville, Ind., & Shreveport, La.



## Merchandising:

# OOT BROS. FEATURE 2 FURNACE HEATING IN IDEA HOME OF YEAR

"Our Better Homes & Gardens 'Idea Home of the Year' features an entirely new concept in Winter-Summer Air Conditioning. We feel that this heating system with *Area Control* is not only a vital part of our idea home but will be a key selling feature," says Syracuse, N. Y. builder Leo Oot.

"We took advantage of the American-Standard 2 Furnaces for the Price of 1 offer and installed two gas-fired winter air conditioners. Separate duct systems for each furnace allowed us to reduce the size of the duct work and actually

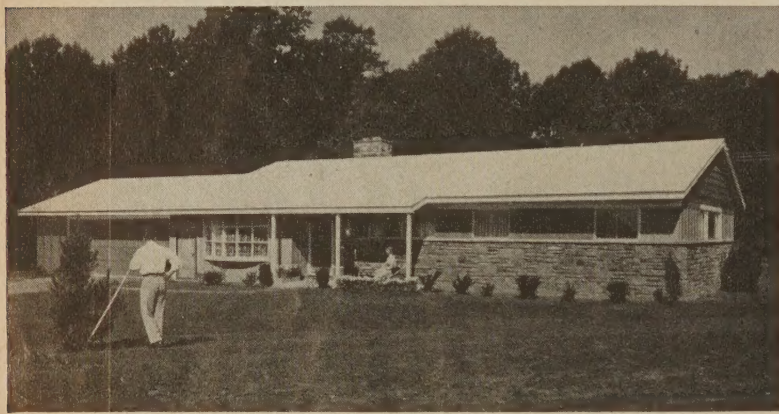
cost no more than for a single heating unit.

"Area Control is ideal for summer air conditioning. For this we used the American-Standard\* ACP-35 (3½ hp) air-cooled self-contained summer air conditioner to give us complete year 'round versatility."

Leo Oot summarized his report on the installation with: "We expect 80,000 visitors to our 'Idea Home of the Year' and we intend to merchandise our American-Standard two furnace installation as one of the model's most exciting new features."



Leo Oot, joins his brothers Earl, Donald, and Robert to form Oot Bros., Inc., of Syracuse, N. Y. . . . one of the nation's leading home builders.



### HOW IT WORKS

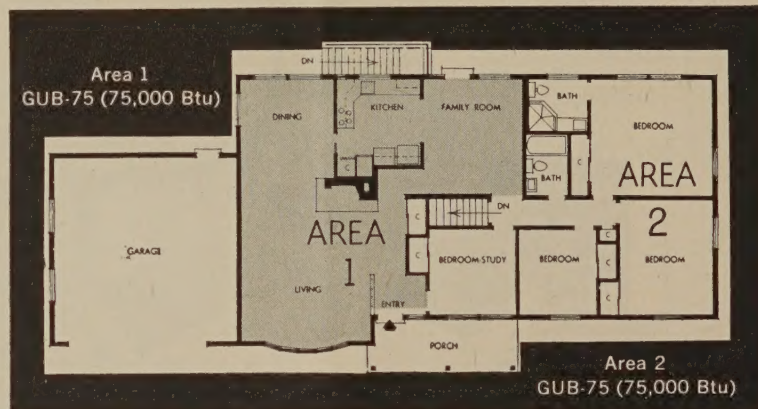
**WINTER AIR CONDITIONING.** Greater comfort and economy of operation is assured with two furnaces—each with its own thermostat and duct system. Heat is distributed to either zone only as required. Area 1 is the

living area containing family room, kitchen, living and dining room. During the day this area requires the most heat while Area 2, which is the bedroom area, can have a lower setting on its separate thermostat.

**SUMMER AIR CONDITIONING** utilizes an air-cooled, self

contained unit with twin compressors. The full cooling power of both compressors can be directed into either area or both areas. Or just one compressor can be used to dehumidify the air throughout the house on temperate days.

Installation by H. R. HUCHZERMEIER, MINOA, N. Y.



## Special Offer:

# 2 FURNACES FOR THE PRICE OF 1

*for model home zone control installations:*

To prove our point that two American-Standard furnaces for zone control will make the heating system your number one selling feature, American-Standard Air Conditioning Division distributors and their dealers offer you—for your model home—two furnaces at the same price as a single furnace of equivalent Btu capacity! Before you place another

heating contract, why not take advantage of this offer? Prove to yourself that a two-furnace zone control system will become your best salesman.

Provide more comfort . . . lower fuel bills . . . longer furnace life! Your customer doesn't have to take these advantages on faith! Here is extra value he can see—two furnaces instead of one!

Contact your local American-Standard Warm Air Heating dealer or mail coupon for name of nearest source

Air Conditioning Division, American-Standard, Dept. HH-9, 40 West 40th St., New York 18, N. Y.

Please send free Zone Control booklet and information on how I can obtain the 2 for 1 special on furnaces for model home installations.

Name \_\_\_\_\_

Company \_\_\_\_\_

Street \_\_\_\_\_

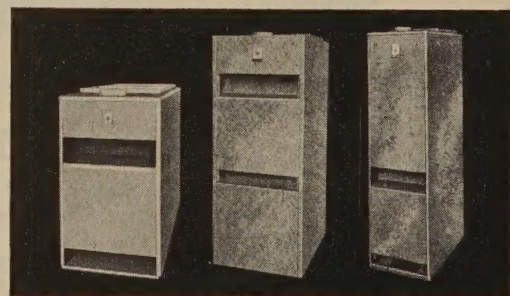
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



\* AMERICAN-Standard and Standard® are trademarks of American Radiator & Standard Sanitary Corporation.

# AMERICAN-Standard

AIR CONDITIONING DIVISION

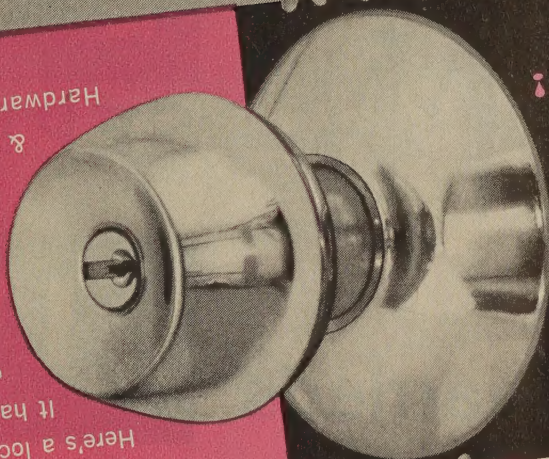


Choose from the complete American-Standard line of gas-fired and oil-fired warm air furnaces and companion summer air conditioners for all residential requirements.





**RUSSWIN**  
doorware



**The lock that has NO "UPSIDE DOWN"!**

Here's a lock that can't go on upside down! It has a horizontal keyway... mounts on either right or left hand doors with no reversing of the cylinder. Simple, labor-saving, fool-proof... good reasons for making it Russwin when you build! See your Russwin dealer. Russell & Erwin Division, The American Hardware Corporation, New Britain, Conn.



**HORIZONTAL KEYWAYS** are available in Russwin standard duty Stilemanor and residential Homegard locksets.



# Ponderosa Pine

## INFLUENCE

millions of prospective home buyers  
thru the pages of the

## INFLUENTIAL



and

## TREND-SETTER

for young marrieds



The Saturday Evening  
**POST**  
SEPT. 27 ISSUE

**LIVING**  
FOR YOUNG HOMEMAKERS  
NOVEMBER ISSUE

This national advertising to your prospects sets the stage for quality home buying. Be sure your homes have warmth, charm, and livability . . . qualities which Ponderosa Pine Woodwork offers the home buyer.

There are authentically styled Ponderosa Pine Window units, panel and louver doors, entrances, mantels, cabinets, moulding, and trim to match any architectural design. And, they finish beautifully.

Because Wood is So Good to Live With

## Ponderosa Pine WOODWORK

An Association of Western Pine Producers and Woodwork Manufacturers

39 SOUTH LA SALLE STREET  
CHICAGO 3, ILLINOIS

**MEMBERS—Woodwork Group**  
ANDERSEN CORPORATION  
ANSON & GILKEY CO.  
BILTRIST CORPORATION  
CARR, ADAMS & COLLIER CO.  
CONTINENTAL SCREEN CO.  
CURTIS COMPANIES, INC.  
FARLEY & LOETSCHER MFG. CO.  
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—LONG BELL DIVISION  
MALTA MANUFACTURING CO.  
MISSOULA WHITE PINE SASH CO.  
MORGAN COMPANY  
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WABASH SCREEN DOOR CO.  
WESTERN PINE MFG. CO.  
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GEORGIA-PACIFIC CORPORATION

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EDWARD HINES LUMBER COMPANY  
INDUSTRIAL WHOLESALE LBR. CO.  
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MCLOUD LUMBER CO.  
MICHIGAN CALIFORNIA LBR. CO.  
J. NEILS LUMBER CO.  
OCHO LUMBER CO.  
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PICKERING LUMBER CORP.  
SCOTT LUMBER CO., INC.  
SETZER FOREST PRODUCTS  
—DIV. OF GLENCO FOREST PRODUCTS  
SOUTHWEST LUMBER MILLS, INC.  
RALPH L. SMITH LUMBER CO.  
TAHOE FOREST PRODUCTS CO.  
TARTER, WEBSTER & JOHNSON, INC.

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U. S. PLYWOOD CORP.  
—SHASTA DIVISION  
WARM SPRINGS LUMBER COMPANY  
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CHAPMAN CHEMICAL CO.  
DAVID ORTIN MOULDING CORP.  
DORRIS LUMBER & MOULDING CO.  
MONARCH METAL WEATHERSTRIP CORP.  
PROTECTION PRODUCTS MFG. CO.  
UNIQUE BALANCE CO.  
WOOD-TREATING CHEMICALS CO.  
ZEGERS, INC.



# WOODWORK ADS LIKE THIS



It's the Windows and Woodwork  
of *Ponderosa Pine*

that give your home this charm and livability

Now is the time to plan your new home! All this beauty, charm and livability is yours when you include Ponderosa Pine Windows, panel doors and other woodwork in your plans.

Practical, too, for Ponderosa Pine Window units resist cold, heat and dust. They're preservative treated for long life. And, regardless of the weather, you'll find that unwanted moisture doesn't form on the frames to damage walls and furnishings.

These are all good reasons why you should plan to build with precision built Ponderosa Pine Woodwork . . . good reasons why Wood is preferred 2 to 1 over any other window material for American Homes. Ask your architect, builder or lumber dealer.

BECAUSE WOOD IS SO GOOD TO LIVE WITH . . .

*Ponderosa Pine* WOODWORK

39 S. LaSalle St., Chicago 3, Illinois

An association of Western Pine Producers and Woodwork Manufacturers.

LOOK FOR THIS SEAL OF WINDOW QUALITY

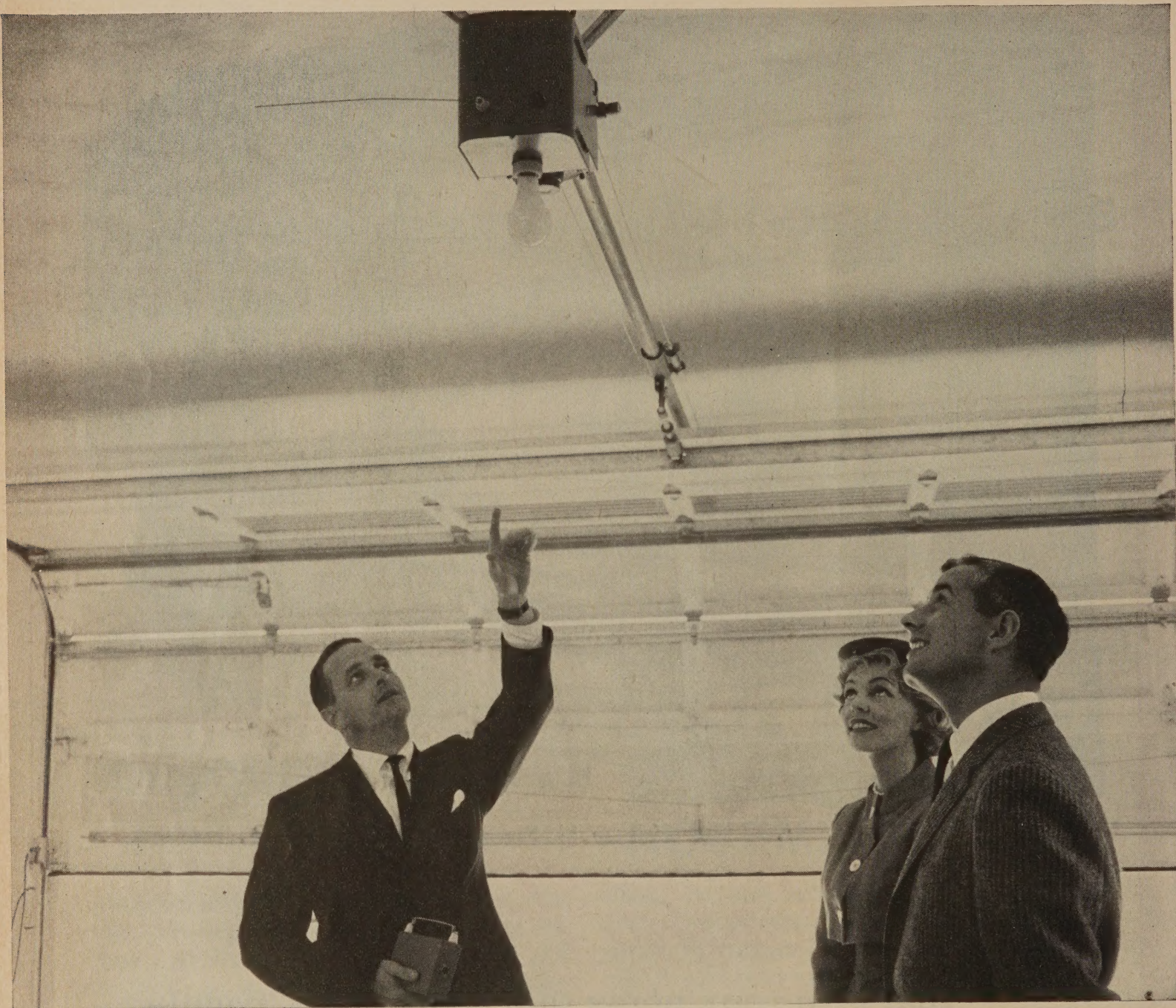


One of a series of beautiful, full-color advertisements.



# DEMONSTRATE THIS MODERN CONVENIENCE

...and sell homes faster



## Delco-matic Garage Door Operator!

Here is the finishing touch to the completely modern home. It's the Delco-matic, and a convenience that appeals to everyone who has ever wrestled a reluctant garage door in the cold, wet and dark. For Delco-matic takes over the job of operating the heaviest, bulkiest moving part in a home. It reduces human effort to button pushing. And it's a dramatic convenience that is easily . . . convincingly demonstrated.

Delco-matic in the garage and an electronic actuating unit, either portable or car-mounted, will do it. Drive your prospect up to the garage. Press the button and let him watch what happens. Up goes the door, on go the lights. Drive into the garage and push a button, either in the car or in the garage or home. Down comes the door, off go the lights. The entire operation is that easy, and it starts your prospect thinking of the comfort he'll enjoy on wet, cold nights. Delco-matic is much more impressive than many of the taken-for-granted labor-savers in the same home.

Mail coupon or look for CRAWFORD DOOR SALES COMPANY in your telephone directory.



### DELCO PRODUCTS

Division of General Motors Corporation, Dept. HH-9, Dayton 1, Ohio

Delco-matic Garage Door Operators are sold, installed, warranted and serviced by Crawford Door Sales Company, the nation's leading garage door specialists.

Please send more information on Delco-matic Garage Door Operators

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_





RELY ON



**Forestone.**

ACOUSTICAL CEILING MATERIAL

\*REG U.S. PAT OFF — U.S. PAT NO. 2,791,289

AI-814

# TODAY

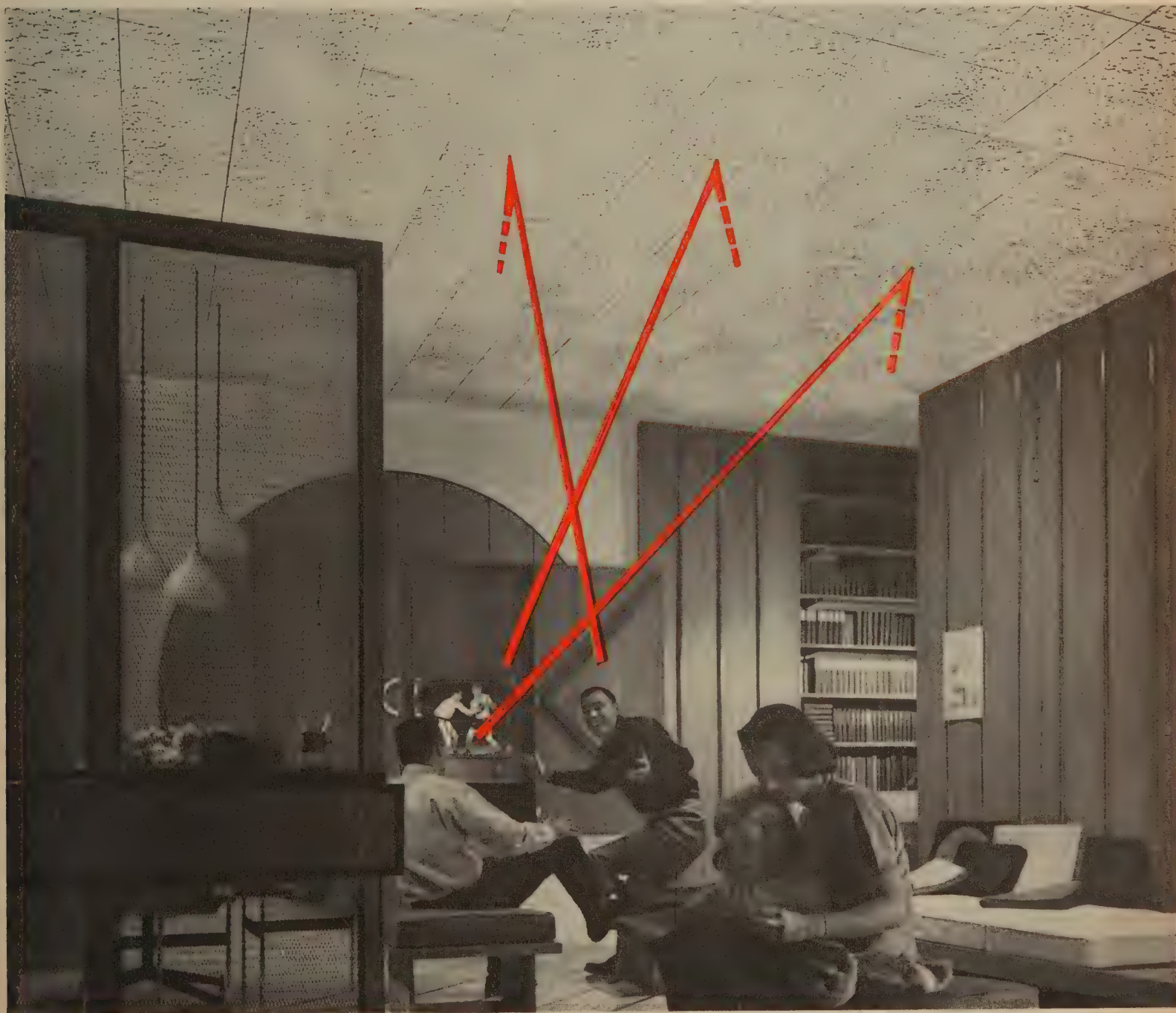
## QUIET HOMES SELL BETTER...

● How can one family enjoy totally different activities when some require quiet and some are unavoidably noisy? No wonder home sound conditioning is becoming such an important consideration for new home buyers.

Forestone ceilings can help sell your homes. They absorb excessive noise in a luxurious looking textured surface. This extra value is a compelling sales point, and because your own men can install Forestone quickly and economically, the final cost is about the same as ordinary ceiling materials.

See Simpson's full line of home building products at the NAHB National Housing Center in Washington, D. C.

Investigate Forestone now. Ask your local Lumber Dealer, your Simpson Certified Acoustical Contractor, or write Simpson, 1008J White Bldg., Seattle, Washington.



*The finest in Douglas Fir, Western Hemlock, Redwood Lumber; Acoustical, Insulating and Hardboard products; Paper; Plywoods and Doors.*





GEORGE SAYS...

Washington's

**PLASTIC  
DRAWERS**

**NEWS!**



• Styled Right • Sized Right • Priced Right  
**FOR EVERY BUILDING NEED!**

- Will not warp, separate, stick or bind.
- Smooth surfaces will not snag.
- Easily cleaned... no corners.
- Fronts to match cabinets easily attached.
- Greater customer appeal.

Washington's Plastic Drawers are molded of high-impact Polystyrene in harmonizing neutral color with chrome-plated steel stiffener slides. Drawer is completely supported by metal sliding on nylon. Installation, shipping and storage costs are at a minimum.



# VERSATILE...Washington Plastic Drawers For:



KITCHENS



WARDROBES



OFFICES



BEDROOMS



BATHROOMS



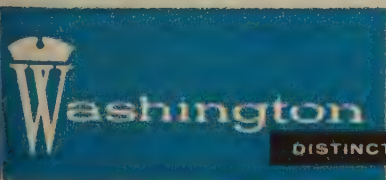
SCHOOLS

20 Drawer Sizes to fit almost any requirement:

	12"	15"	18"	21"	24"	27"
3 TO 4	3310	3313	3316	3319	3322	3325
4 TO 5		3413	3416	3419	3422	
5 TO 7		3613	3616	3619	3622	
7 TO 9		3813	3816	3819	3822	
9 TO 11		3013	3016			
	12	15		18	21	

SMALLEST DIMENSION IS MINIMUM OPENING REQUIRED

For complete information on Washington's Plastic Drawers, fill out coupon below and mail.



WASHINGTON STEEL PRODUCTS, Inc.  
Dept. H & H-6 Tacoma 1, Washington

TO: WASHINGTON STEEL PRODUCTS, Inc.  
Dept. H & H-6, 1940 East 11th Street  
Tacoma 1, Washington

Gentlemen:  
Send complete information on Washington's Plastic Drawers.

Name \_\_\_\_\_  
Business \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



# NEW AMVIT JOINTED GLAS-GLAZ IS ROOTPROOF

The Amvit Joint on Glas-Glaz, the remarkable new glass lined pipe designed for use as both an under-the-house drain and as a house-to-street sewer connection, is a factory made compression joint made from plasticized resins of polyvinyl chloride.

The joint is on the pipe delivered ready for installation. All you do is push the pipe together. The surfaces of both bell and spigot rings are in constant compression because the diameter of the plastic spigot ring is larger than the largest diameter of the plastic bell ring. *Nothing can enter the line.*

With Amvit Glas-Glaz in new long lengths, you can install an average house connection line in less time than ever before, thus reducing labor costs. There's no other equipment needed, no tools, no caulking.

Glas-Glaz is the true plumber's pipe, a product that will guard your reputation as a quality home builder.

It has everything, costs no more than ordinary pipe, and will outlast the life of the house.

Amvit Glas-Glaz is available *only* from American Vitrified Products Company and their authorized dealers.



*Write for this complete folder now.*

SINCE 1848



**American Vitrified  
Products Company**

NATIONAL CITY BANK BUILDING  
CLEVELAND, OHIO



Long-Bell

**Ven-O-Wood®**

and

**flakewood®**

decorative  
Panel-Board

smooth... smart... sophisticated

Ven-O-Wood

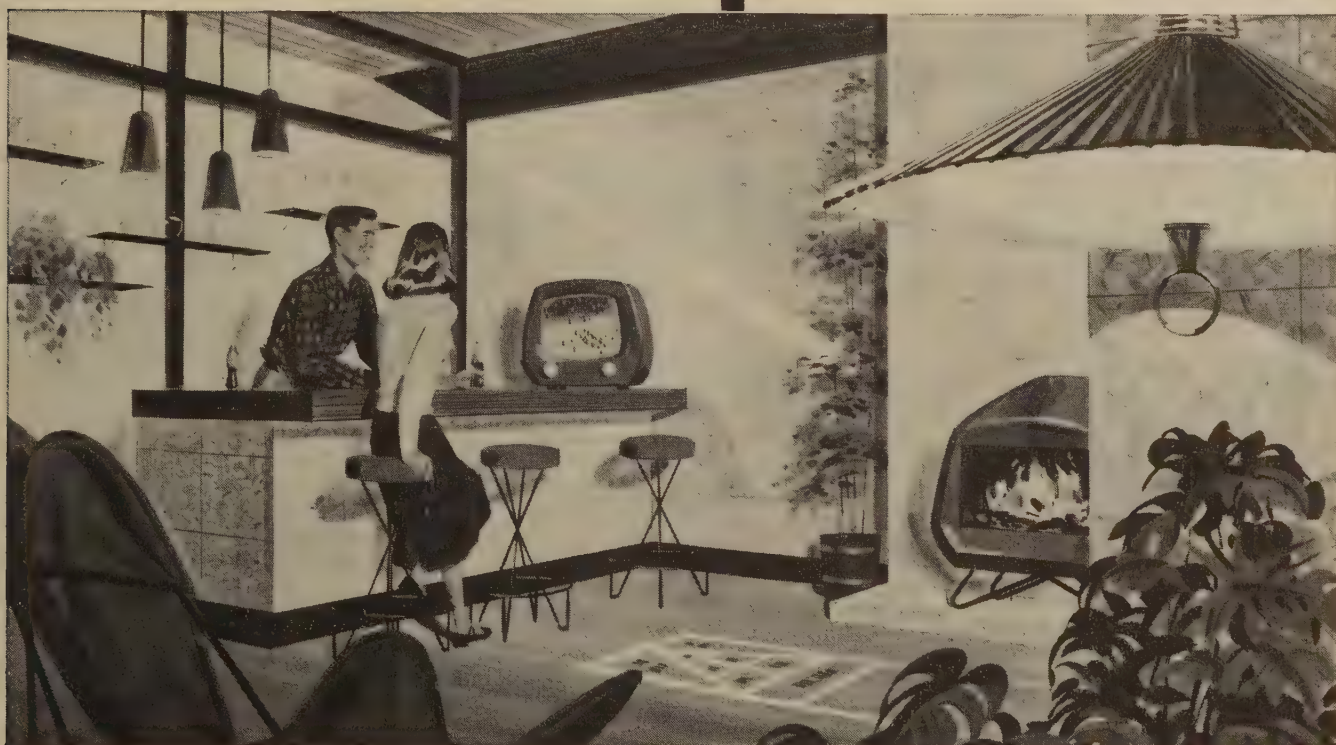
Philippine Mahogany  
Rift Grain Fir

Flakewood

Cedar, Fir, Maple,  
Pine and Philippine  
Mahogany Flake

Announcing:  
Two New Wood Paneling Products  
**UNSELECTED BIRCH  
VEN-O-WOOD  
ECONOMY FLAKEWALL\***

\*Trademark



**International Paper** COMPANY

**Long-Bell**  
DIVISION

Mail this coupon for the whole story on these outstanding Long-Bell panelings.

INTERNATIONAL PAPER COMPANY  
Long-Bell Division, Dept. HH  
Longview, Washington

Please send me a FREE sample of Ven-O-Wood and Flakewood, along with complete descriptive information.

Name \_\_\_\_\_

Firm Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

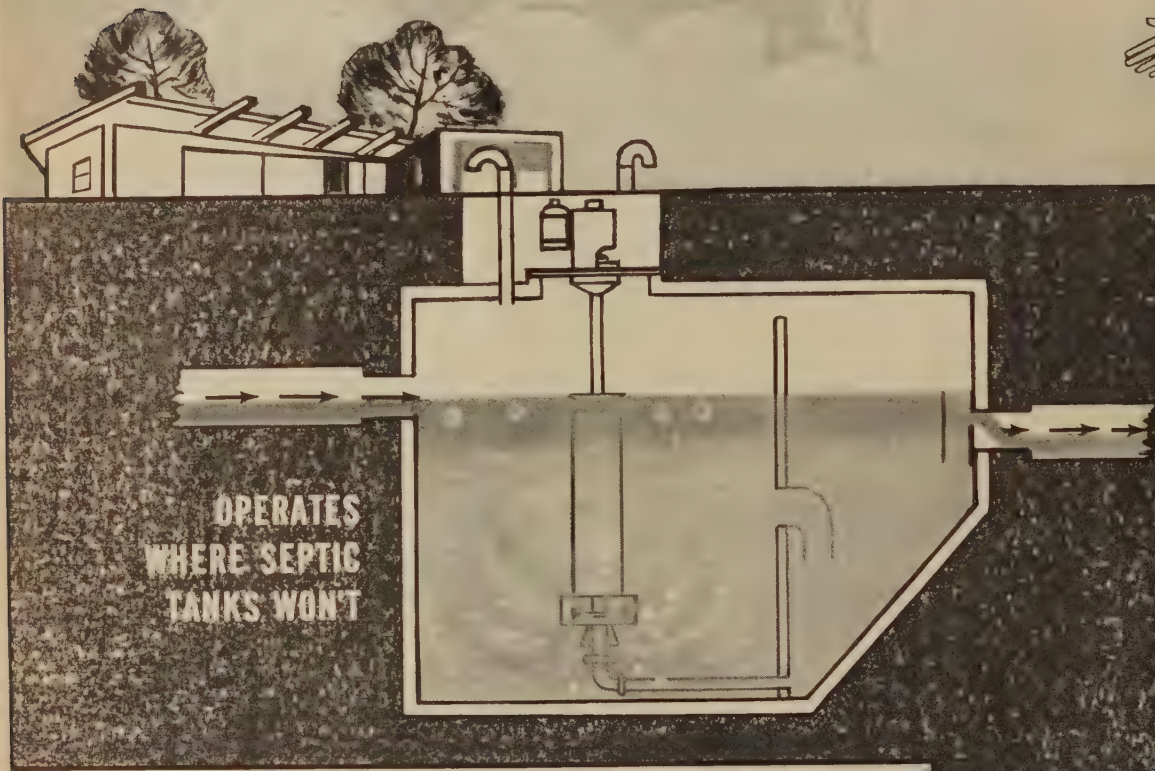


# YEOMANS

# REVOLUTIONARY CAVITETTE®



It's the single-home, aeration-type sewage treatment system. It meets minimum FHA property standards. It meets all criteria of N.R.C. Report No. 586 (for U.S. Public Health Service)



## New Sales Appeal for Countryside Homes

The Cavitette is more than just an answer to "septic tanks not approved here." It also gives the builder something new with which to sell. For example, he can tell prospective buyers about such advantages as: no objectionable odors; no tank cleaning; handles all home appliances; operates on same principle (aeration) as city sewage treatment plants. In fact, the home buyer will recognize the Cavitette to be the final step in complete modernization of countryside living.

But what about the cost-profit picture? In most areas, the complete Cavitette System will cost less than a complete septic tank installation with tile bed. It may also permit smaller lot sizes . . . or open up low cost land where septic tanks are not allowed.

Cavitette dealers and distributors are being set up throughout the country. But, if you have no outlet nearby at present, we will be happy to supply any information you need. In the meantime, consult your controlling health authorities for local requirements.

## YEOMANS BROTHERS COMPANY

2003-8 N. Ruby St., Melrose Park, Ill.

Please send me literature specified below:

- ☐ Digest of the N.R.C.—USPHS Report No. 586.
- ☐ Complete technical information on the Cavitette.

Name\_\_\_\_\_

Title or Business\_\_\_\_\_

Company\_\_\_\_\_

Street\_\_\_\_\_

City\_\_\_\_\_ Zone\_\_\_\_\_ State\_\_\_\_\_

No. of Homes Planned\_\_\_\_\_



# THIS ADVERTISEMENT TO HOME BUYERS SHOWS HOW HYDRONICS\* **ADDS SALES VALUE** TO YOUR HOMES



## PLAN YOUR HOME FOR MORE THAN ONE TEMPERATURE

B&G Hydro-Flo Heating offers a simple, low-cost way to have perfect comfort in every part of your home. This hydronic\* system can be zoned so that with only one boiler you can have as many temperatures as you wish. For example, a sunny, desirable... in the living room... 68° in the recreation room where less heat is needed... 65° in the bedrooms for cool, restful sleeping. All with a minimum of simple, dependable equipment. The B&G Hydro-Flo Forced Hot Water System offers the superior comfort of radiant heat, smoothly controlled to meet every change in the weather. That's why this system is so economical - no fuel wasted by over heating. It delivers heat instantly when needed in every corner of the house.

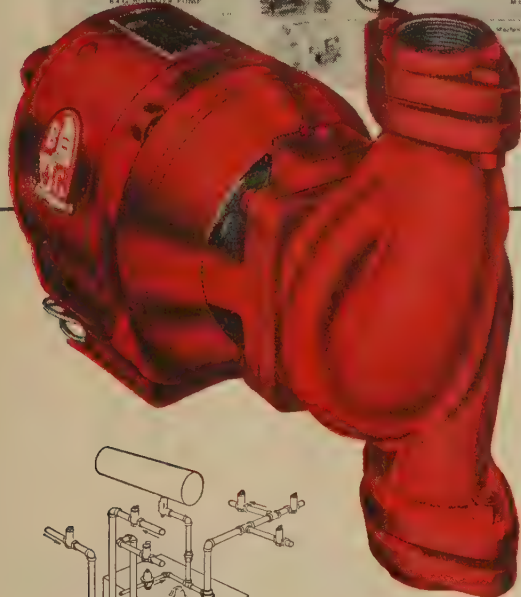
For complete information, send the coupon for free, fully illustrated booklet.

These are the plus values of the B&G Hydro-Flo System



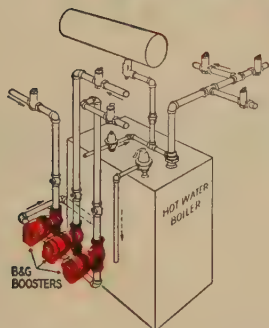
1. Hot water from the boiler flows to the room.

**Hydro-Flo SYSTEM**  
BELL & GOSSETT COMPANY  
Morton Grove, Illinois



## B&G BOOSTER ...key unit of the system

Under thermostatic control, this silent electric pump circulates hot water from the boiler through the system...supplies heat to match the weather. Quiet operation and long-lived dependability are outstanding characteristics of the B&G Booster. Nearly 3,000,000 have been installed to date.



The Booster Pumps in this typical installation maintain three zones at different temperatures.



Reg. U. S. Pat. Off.

# Hydro-Flo SYSTEM

## BELL & GOSSETT C O M P A N Y

Dept. FK10, Morton Grove, Illinois

Canadian Licensees: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto 16, Ontario

It takes *extra values* to soften up today's tough buyers. And what can add value to a home like B&G Hydro-Flo Heating...a *radiant forced hot water system...hydronic\** heating at its best!

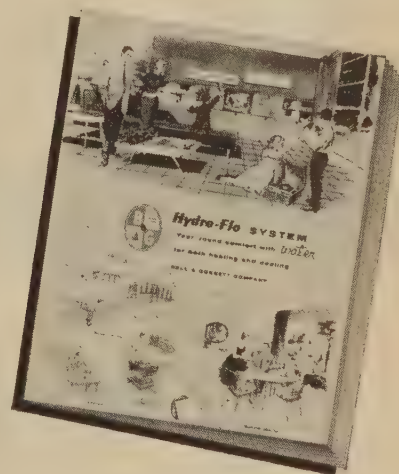
The B&G Hydro-Flo System advertisement reproduced here presents an entirely new conception of home comfort. It stresses the advantages of zoned heating, which permits different areas of a home to be kept at temperatures best suited to their functions. For example, the living room at 72°, recreation room at 68° and bedrooms at 65°.

Add to this the economy and convenience of a year 'round supply of hot faucet water, heated by the same boiler that heats the house. Cleaner, quiet operation, accurate temperature modulation...fast heat when needed...low fuel bills, all are *plus* features which add sales value to any home.

These are the reasons why a B&G Hydro-Flo System is a *major selling feature* —not just a heating plant.

## Send for free booklet

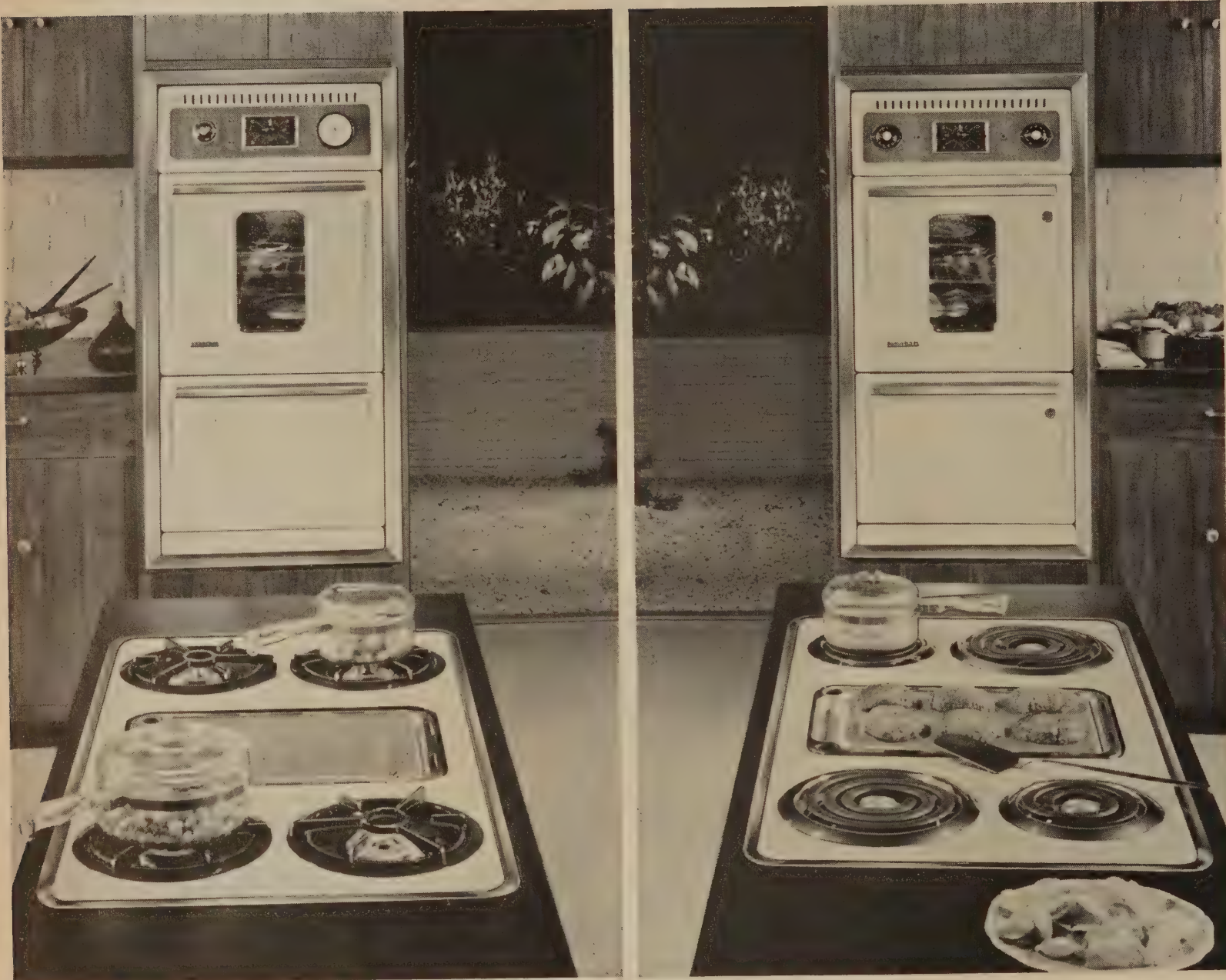
This fully illustrated booklet gives the complete story of the B&G Hydro-Flo System—worth while reading for any builder.



\*Hydronics: The science of heating and cooling with water.



# GAS OR ELECTRIC



*Same size opening lets you offer either*  
**AT NO EXTRA CABINET COST!**

No need to run up your labor and materials costs! Suburban ovens and cook tops use the same size openings for corresponding electric and gas models. And with Suburban you not only offer your prospects their choice—you offer them more work-saving features than any other built-in range on the market. Yes, *all* the features Home Economists all over the nation have said women *want!* Your prospects will see and want these features in the Suburban units you put in your kitchens . . . just as they see them pictured in America's leading home magazines.

**GET YOUR VALUE-PACKED PRICE FROM YOUR DISTRIBUTOR—SEND COUPON FOR LITERATURE TODAY!**

**suburban®**  
*America's Finest Built-in Range*

Samuel Stamping & Enameling Co.  
 Dept. HH-98, Chattanooga, Tenn.

I'd like to have the facts about Suburban.

☐ Gas ☐ Electric

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

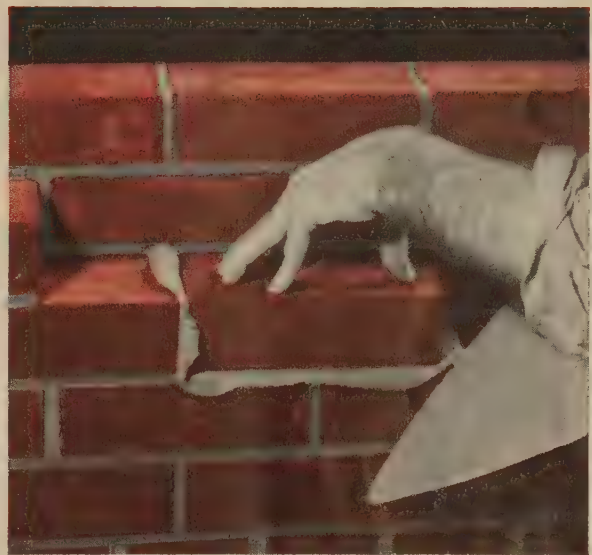


# **BRIXMENT MORTAR**

## ***Is More Plastic***



*To compare the plasticity of any two mortars, try shoving a brick into place, with a full head*



*joint. The more plastic the mortar, the easier the work. Try this with Brixment mortar!*

### **AND GOOD PLASTICITY**

### **IS THE FIRST REQUIREMENT OF GOOD MORTAR**

One of the most important characteristics any mortar can possess is *plasticity*. Within certain limits, plasticity is the greatest single factor not only in the *economy* of the brickwork, but also in its strength, its neatness, and its resistance to the passage of water.

One of the outstanding characteristics of Brixment mortar is its unusual plasticity.

Because of this plasticity, a bag of Brixment will carry three full cubic feet of damp sand and still be as plastic as 1-2-9 cement and lime mortar.

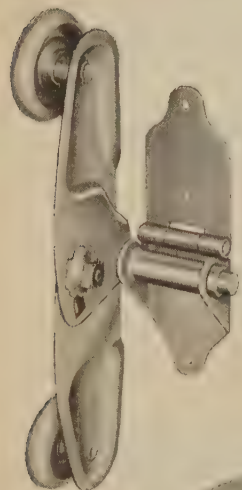
Brixment mortar's exceptional plasticity makes it easy for the bricklayer to secure neat, economical brickwork, with the brick properly bedded, and the joints well filled.

**LOUISVILLE CEMENT COMPANY, LOUISVILLE 2, KENTUCKY**

*Cement Manufacturers Since 1830*



# WHY McKEE OVERDOORS OFFER YOU MORE!



## ONLY McKEE DOORS

### HAVE ADJUSTABLE "TWIN ROLLERS"

- ★ LONGER DOOR LIFE
- ★ WEATHERTIGHT CLOSURE
- ★ RAPID INSTALLATION
- ★ TROUBLE-FREE OPERATION
- ★ CONSTANT- BALANCE WEIGHT DISTRIBUTION

### TWICE THE VALUE...NO EXTRA COST!

**GUARANTEED INSTALLATION  
AND SERVICE BY YOUR LOCAL  
McKEE DISTRIBUTOR'S  
FACTORY-TRAINED EXPERTS.**

More Sizes and Designs in Stock.

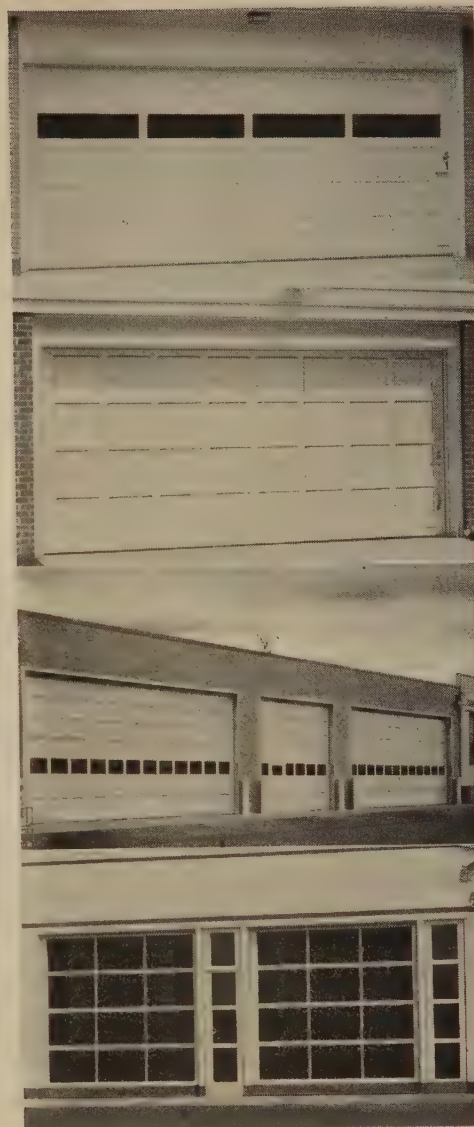
Lifetime Guaranteed "Dorlux" or  
Exterior-Grade Fir Panels.

Custom Woods, Finishes and Materials Available.

Custom-Computed Counterbalance Springs.

Stiles and Rails Are Mortised and Tenoned,  
Steel Pinned and Glued.

Galvanized Steel Track and Hardware.



**SEND FOR THE *NEW* McKEE  
OVERDOOR CATALOG-MANUAL**

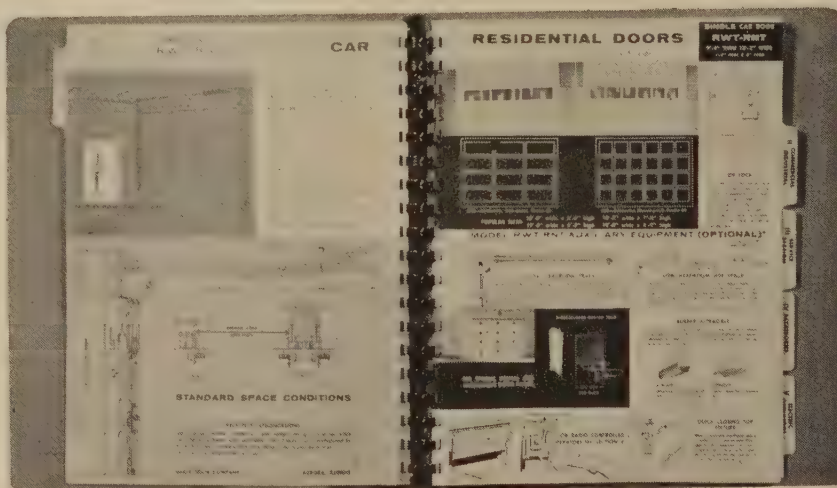
### THE LATEST, BEST, MOST COMPREHENSIVE OVERDOOR GUIDE FOR ARCHITECTS—BUILDERS—CONTRACTORS

Complete information, diagrams, specifications, optional equipment, applications...plan, perspectives, and photographs of the completed door.

Special engineering consultation—a McKee service.

Distributors are located in all  
principal cities.

Look for McKee Doors in the "Doors" section  
of the **YELLOW PAGES** or contact  
the Sales Manager, McKee Door Company,  
Aurora 1, Illinois



**RESIDENTIAL • INDUSTRIAL • COMMERCIAL • SERVICE STATION**

# McKEE DOOR COMPANY

85 HANKS AVENUE • AURORA 1, ILL.



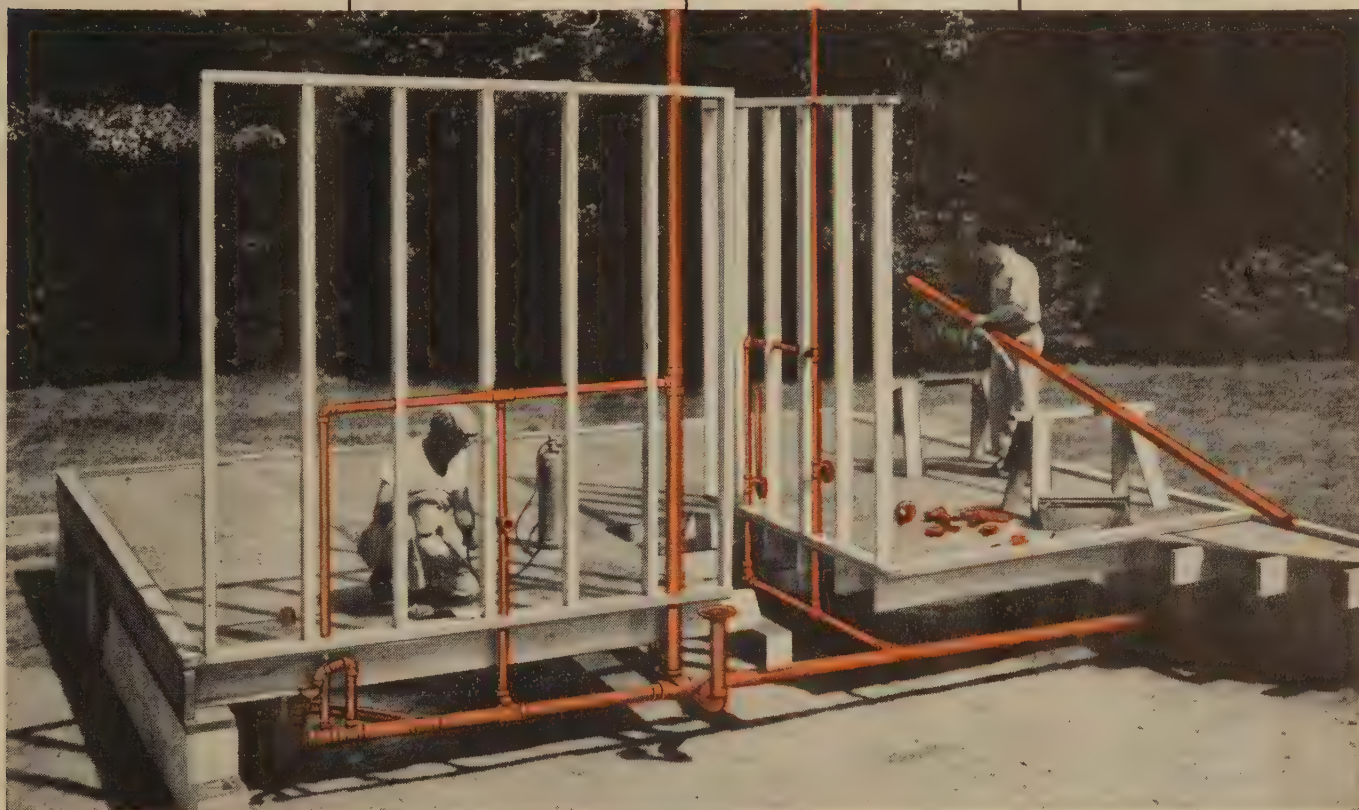
# In every way, Copper is better . . .

**LIGHTER WORK.** Copper drainage tube and fittings needed for a job are only  $\frac{1}{4}$  the weight of ferrous materials. And there's no laborious threading or caulking.

**FEWER JOINTS.** Copper drainage tube comes in easy-to-handle 20-foot lengths. Install long runs with fewer joints and fittings — save installation time and cost.

**CLEANER.** Craftsmen say they like to install copper tube — it's cleaner work. There's no mess from threading, caulking, pouring lead and wiping joints.

**FASTER.** Contractors all over the country are finding that normal time for roughing-in soil, waste and vent lines can be cut about half with copper tube.



**SAVES SPACE.** A 3-inch copper tube stack and fittings can be installed within a 4-inch partition. There's no need for wide plumbing walls or build-outs.

**MAKES A BETTER JOB.** Copper tube won't rust; its smooth inside surface resists clogging—and a copper drainage system lasts. Your customers stay satisfied.

**SELLS BETTER.** To your customer, an all-copper plumbing system means quality and better resale value for his property—he knows maintenance will be less, too.

**TAKES FEWER TOOLS.** Only a few light tools are needed to install copper tube —no heavy, cumbersome equipment to haul and set up. You're on the job faster.

## . . . and you save money, too

Many of these advantages produce substantial dollar savings to the plumbing contractor and builder. Right now, savings are greater than ever.

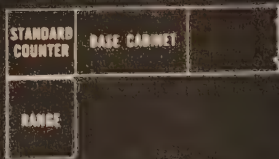
For instance, the estimated cost to install a copper tube drainage system for two bathrooms and kitchen as illustrated in the model above was 20% lower than for cast-iron and steel piping.

Use copper on your next job and compare time and costs. Take advantage of these savings to build more business by offering ALL-COPPER plumbing. For descrip-

tive literature and cost comparisons—write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont. 6804

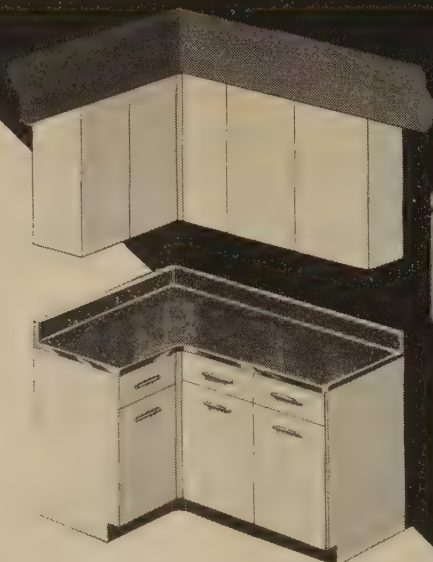
**ANACONDA<sup>®</sup>**  
**COPPER TUBE AND FITTINGS**  
*Available through Plumbing Wholesalers*  
*Made by*  
**The American Brass Company**





### 1. Straight Counter Corner

Republic's base end closure panel for a dead corner adjacent to an appliance is in a straight line, providing greater economy because no special corner counter top is needed as with some other brands. Saves up to 30%.



**2. Dead-Corner Plan**— Most economical way to turn a corner, but sacrifices two feet of corner storage below counter, three feet in wall cabinets. Stock corner fillers join the cabinets.

# 4

## ways to cut corner costs

You can answer the requirements of any kitchen, any buyer . . . and you cut costs . . . when you select and install Republic Steel Kitchens. Work's done in a few hours, rather than putting in job-built wood cabinets that take two men up to a week to finish. And . . . there's *no* painting, *no* finishing, *no* expensive callbacks to fix warped doors and sticky drawers.

Enjoy planning freedom *plus real economy* with the flexible Republic Steel Kitchens line. Here, for example, are but four of 54 *sales and savings ideas* from our popular "Kitchens Sell Homes" booklet. Start cornering your costs . . . send for your free copy today.

**REPUBLIC STEEL KITCHENS**  
BUILDER SALES • DEPT. C-5229  
1028 BELDEN AVE., CANTON 5, OHIO

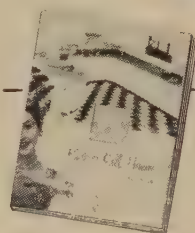
- ☐ Send my free copy of "Kitchens Sell Homes."
- ☐ Have my nearby Republic Steel Kitchens distributor call.

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



## REPUBLIC STEEL *Kitchens*

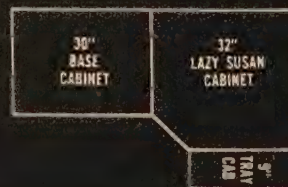
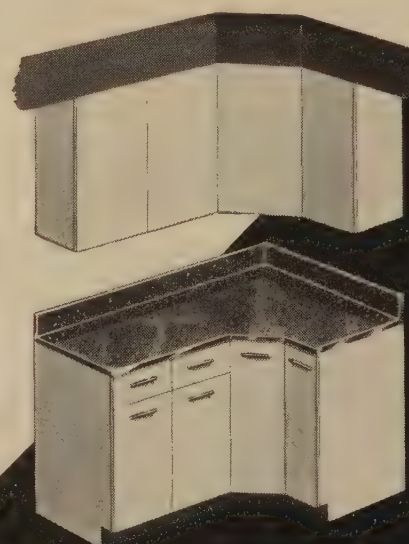
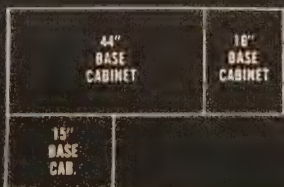
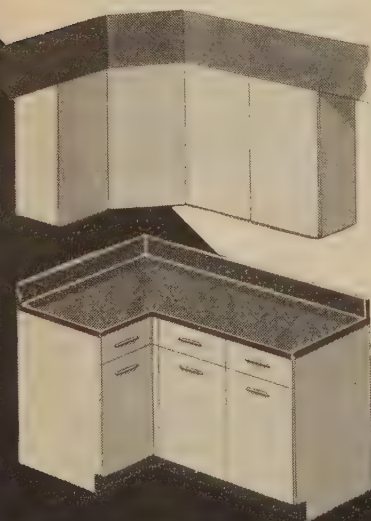
TURQUOISE • PINK • WHITE • YELLOW . . . at no extra cost!

### 3. Reversible Corner Plan

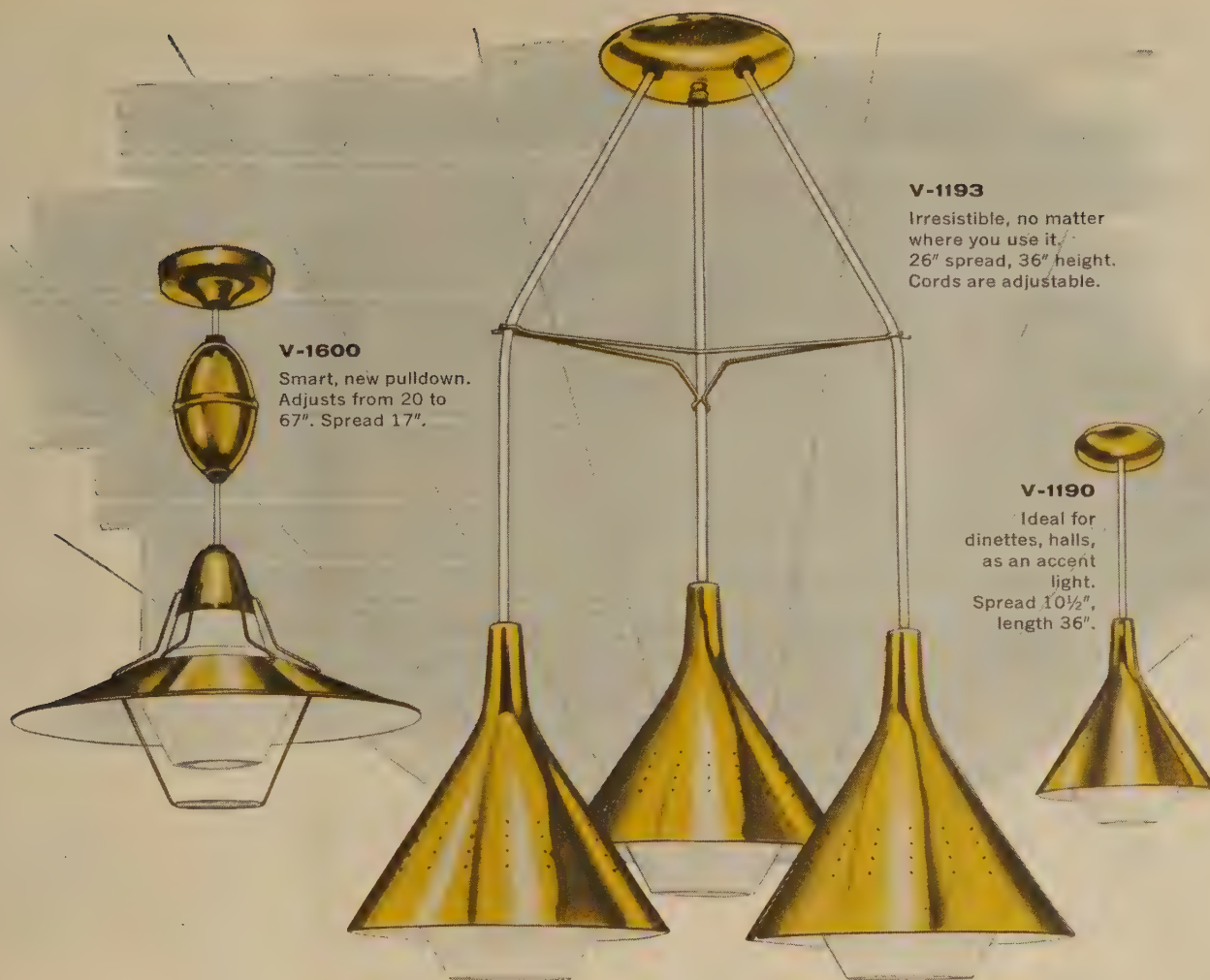
Republic's 44" corner cabinet can be switched right or left. Dead-Corner Plan costs  $\frac{1}{3}$  less, but reversible method provides maximum corner storage. Same stock counters as in No. 2 can be used.

### 4. Diagonal Corner Plan

Spinner cabinet and stock matching counter still costs less than No. 3, looks de luxe. Full storage counter allowed here, and on wall where Republic's corner wall cabinet has been used.







**V-1600**

Smart, new pulldown.  
Adjusts from 20 to  
67". Spread 17".

**V-1193**

Irresistible, no matter  
where you use it.  
26" spread, 36" height.  
Cords are adjustable.

**V-1190**

Ideal for  
dinettes, halls,  
as an accent  
light.  
Spread 10½",  
length 36".

the Gleam of...

the Sparkle of...

# BRASS 'N GLASS

...to capture her heart and clinch the sale!

Old world elegance, new world styling, that's the happy blending Virden offers in its new line of Brass 'N Glass lighting fixtures. Of imported glass and gleaming brass, these fixtures will set your house apart, add the sales excitement that makes prospects say "yes."

Virden distributors in all major cities have these fixtures on display now. For the name of the one nearest you, look in the yellow pages of your telephone book. For a colorful brochure (V-100) write John C. Virden Company, Dept. HH, 5209 Euclid Avenue, Cleveland 3, Ohio.



**VIRDEN**  
Member American Home  
Lighting Institute

Building a model home? Ask your distributor about **VIRDEN'S Model House Plan.**





NEW DESIGN . . . NEW LOW COST

# THE **beacon** HOME

from U. S. Steel Homes Division . . . aimed directly at your \$10,000 market

U. S. Steel Homes Division announces a brand-new *low-cost* package home—the BEACON. *The new USS BEACON can be erected on a full basement, crawl space, or slab foundation.* The BEACON line features the structural advantages of steel wall-framing, and is available in five architectural styles. *BUT*, the BEACON package also contains many new innovations, all contributing to a material cost reduction. The result: a brand-new *low-cost* manufactured home.

**Build the new BEACON Homes—in all five architectural models. And be sure to point out these features to your customers:**

- Large kitchen with Youngstown steel cabinets, in color.
- Three extra-large bedrooms.
- Large picture window in living room.
- Plenty of storage space, both inside and outside.
- Combination storm and screen doors.
- Large attic ventilating louvers providing fresh air flow.
- All load-bearing walls are *steel-framed*.
- Engineered and factory-assembled roof truss system.
- The same high-quality workmanship and design that marks all USSH homes.

**Complete package**—The BEACON Home comes in a truly complete package, including storm doors, window screens, and full architectural treatment. Builders will find that erection costs in the field will be substantially lower. The BEACON package contains pre-assembled trusses and new factory-finished exterior. Completely finished windows are included, even to the final coat of paint. You get all these advantages at a new low price with the BEACON package. Send the coupon today for complete information.

*USS is a registered trademark*

.....  
 •  
 • **United States Steel Homes Division**  
 • **United States Steel**  
 • **Dept. HH-98, 525 William Penn Place**  
 • **Pittsburgh, Pa.**

•  
 • *Please send me plans, complete details, and promotional information*  
 • *on the new BEACON Home.*

•  
 • **Name**.....

•  
 • **Firm**.....

•  
 • **Address**.....

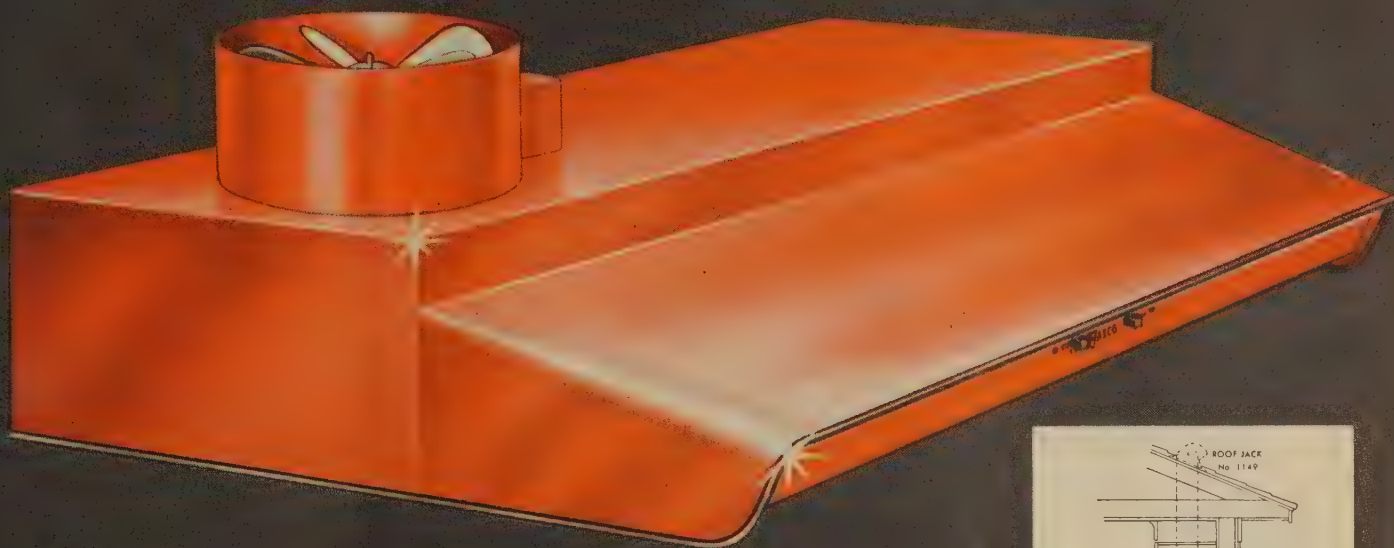
•  
 • **City**.....

•  
 • **State**.....

 **homes**  
 United States Steel Homes Division • United States Steel • Pittsburgh, Pa.



SERIES 92 FUNCTION-AIRE IN COPPER FINISH

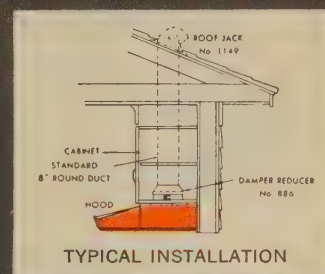


*Introducing the*

# FASCO function-AIRE

*new low cost power range hood with the*

**Slim Trim  
LOOK**



HERE IT IS! The builders model of the popular slim trim power range hood by Fasco. This is the low-cost hood for projects and developments with glamorous style lines that fit so well with today's functional kitchens.

The FUNCTION-AIRE is a complete unit with light,

built-in ventilator and filter . . . completely pre-wired for quick and easy installation.

It will pay you to take a close look at this low-cost beauty . . . the Fasco FUNCTION-AIRE will give your kitchens that special sales appeal at modest cost to you. For complete information write Fasco, Dept. HH-958.

## **FASCO function-AIRE**

*is a completely equipped,  
pre-wired unit that  
installs in minutes!*



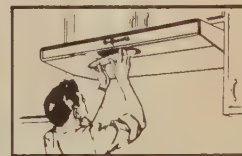
Cut hole in cabinet  $11\frac{1}{2}''$  x  $9\frac{1}{2}''$ — $1\frac{1}{8}''$  from back and  $\frac{3}{4}''$  from left side.



Fasten hood to cabinet. Use standard 9" round duct or a Fasco damper reducer Model 886 with 8" round duct.

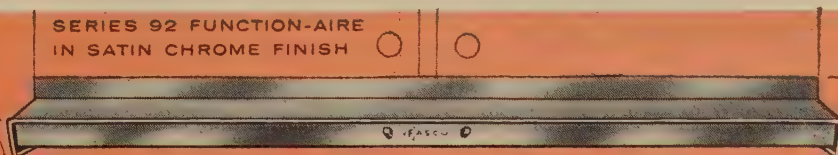


Remove junction box cover and connect two white to white of line and black to black of line. Replace junction box cover.



Replace filter, install 60 watt bulb and the Fasco Function-aire is complete . . . ready to go.

SERIES 92 FUNCTION-AIRE  
IN SATIN CHROME FINISH



FASCO INDUSTRIES, INC.

North Union at Augusta

Rochester 2, New York



more



for the choosing

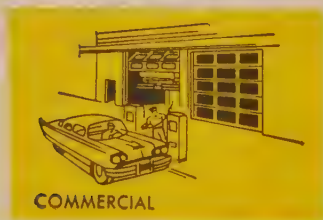
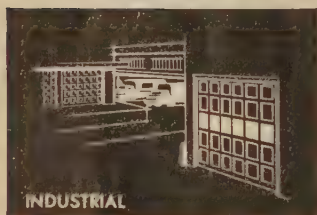
more



for the money



## with Crawford Doors



Looking for a single, complete-line source for all your residential garage, commercial and industrial door requirements? You've found it! For Crawford Door offers you all the door models, styles and sizes you'll ever need. And every door in the line . . . from the widely imitated (but never equalled) deluxe Marvel-Lift series to the low-cost Fleetwood and Vanguard models . . . is competitively priced, yet has advanced engineering and design features plus a superior quality of materials and construction that you just won't find in other doors.

Now, when you can buy the finest door on the market, at a price that's right . . . when that door has a dramatic, distinctive beauty and "feather-touch" operating ease that helps sell the homes you build . . . and when skilled, Crawford-trained personnel are locally available to handle all your installation and service, why look further for *your* door needs? Why, indeed, when your Crawford Distributor is only a telephone call away?



**CRAWFORD DOOR COMPANY**

215-20263 HOOVER ROAD • DETROIT 5, MICHIGAN



# Don't kid yourself about garbage disposers!

*Why do thousands of sales-minded builders insist on In-Sink-Erator in their homes?*

Because women so thoroughly dislike messing with garbage, one of the best silent salesmen in your model home is a nationally-known garbage disposer. Experience proves it. And a recent survey of women who own and use an In-Sink-Erator proves that actually seven out of ten name this disposer their favorite or next-to-favorite appliance!

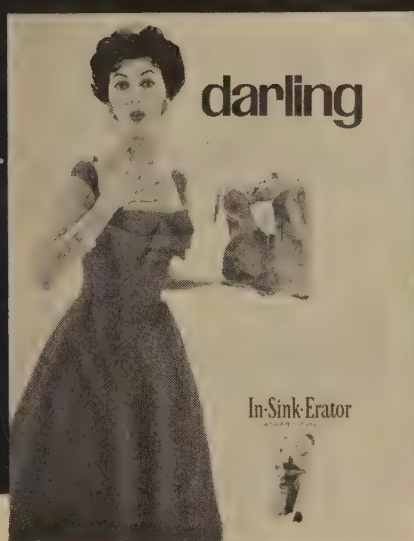
**No other disposer matches In-Sink-Erator's "sales-packed" exclusive features!**

Most women—the major influence in any new home

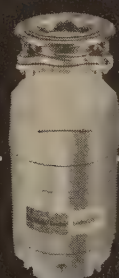
sale—make their buying decision right in the kitchens of your homes. Here's where economical In-Sink-Erator really sells hard for you. Outstanding exclusive features no other disposer can match—like patented automatic reversing action that grinds food waste finer and faster, and whisper-quiet action—give her the kitchen efficiency she wants most, *which often turns the sale to you.* To learn more about how In-Sink-Erator helps sell *your* homes, see your plumber or write, wire or phone In-Sink-Erator Mfg. Co., Dept. HH-89, Racine, Wis.

*The industry's most complete line of quality disposers*

A MODEL FOR EVERY BUILDER NEED



**MODEL 27.**  
The ultimate in beauty and smooth performance



**MODEL 17.**  
The best lock-cover disposer you can buy today



**TELEX.**  
It telescopes to fit any existing high or low drain line



**MODEL 77.**  
Includes all exclusive features at a modest price.



**MODEL 333.**  
Challenging all other budget-priced disposers

▲ *Dramatic national ads and powerful promotion aids*

*help sell your homes when you team up with*

 **In-Sink-Erator®**

Originator and Perfector of the Garbage Disposer





Mr. Kieren (right) with Mr. Al Braun of Wisconsin Bell Telephone Company.

## "Every built-in telephone outlet is a talking point"

—says Mr. John Kieren, Builder, of Milwaukee, Wisconsin

"Nowadays home buyers are shopping around more than ever," says Mr. Kieren. "They compare a lot of homes before they buy. It's important to have sales features that make *your* home stand out, and my agents find that planned telephone outlets are invaluable talking points.

"The reason is simple. Telephones are important in modern living. Home owners want them conveniently located and attractively in-

stalled. As a result, the builder who plans ahead for telephone outlets is sure to be offering people what they want."

. . .

Your local Bell Telephone business office will be glad to help you with concealed wiring plans. For details on home telephone wiring, see Sweet's Light Construction File, 8i/Be. For commercial installations, Sweet's Architectural File, 32a/Be.

**BELL TELEPHONE SYSTEM**





**Corners stay tight  
Boards stay flat  
Nailing stays put  
Paint lasts longer**

...these are the "hidden values"  
in PALCO Redwood Siding

Redwood exhibits these *potential* values *only* after skilled processing from forest to homesite. Through 90 years, The Pacific Lumber Company has emerged as the oldest major redwood producer because PALCO Siding has *earned* the reputation for delivering these values with unsurpassed uniformity — at no extra premium in cost. For PALCO has constantly pioneered efficient flow-line methods, scientific seasoning and kiln drying, improved equipment, and personnel policies which keep skilled and responsible experts on the job from apprenticeship to retirement. These are the ingredients which make up the "hidden values" you expect in redwood — and you *get* in PALCO Redwood Siding.



Recently resold, this 30-year-old Berkeley, California home demonstrates the permanence of good design and the "hidden values" you can expect in Palco Redwood Siding. Note tight mitered corners, flat surfaces, and evidence of perfect paint retention.

807

*Specify the best in Redwood*

**PALCO®**

**THE PACIFIC LUMBER COMPANY**

*Since 1869 • Mills at Scotia, California*

100 BUSH ST., SAN FRANCISCO 4 • 35 E. WACKER DRIVE, CHICAGO 1 • 2185 HUNTINGTON DRIVE, SAN MARINO 9, CALIF.

MEMBER OF CALIFORNIA REDWOOD ASSOCIATION

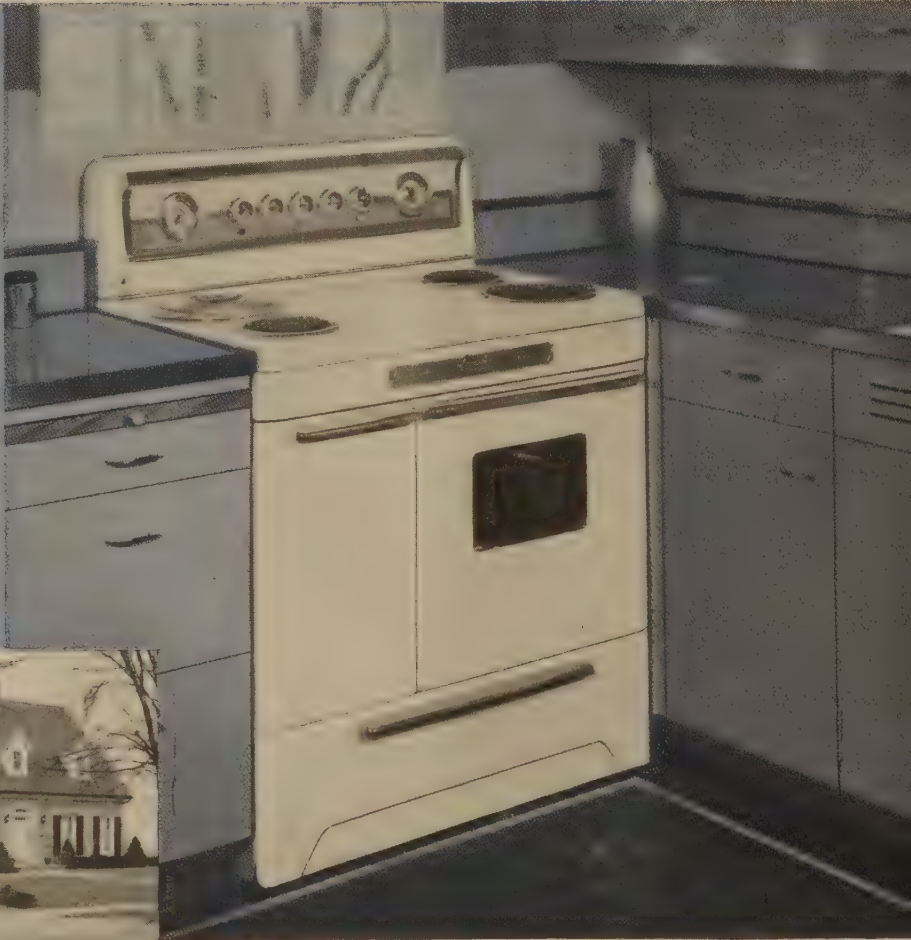




# ELECTRIC RANGES LEAD

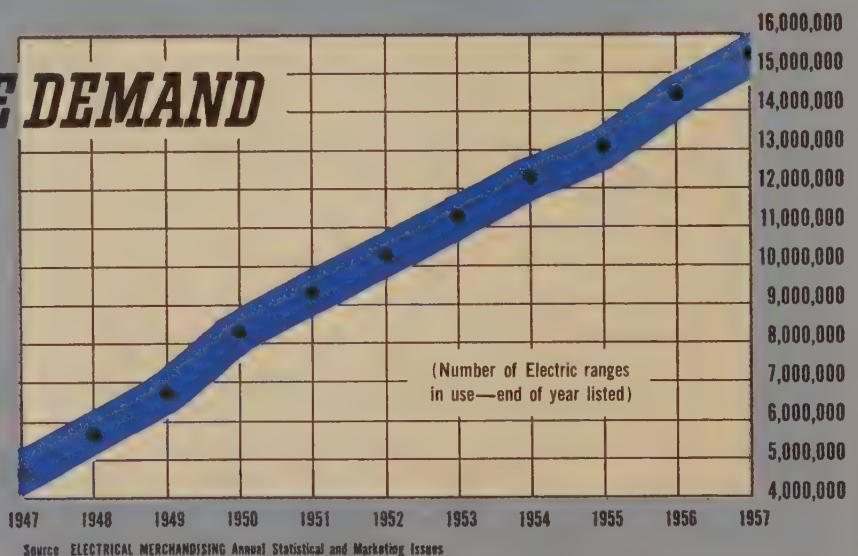
"It is important that today's modern homes are built with a great deal of thought given to convenience. For this reason, we encourage the installation of wiring for modern Electric Ranges in the homes we build.

"We have been in the building business since 1887 and feel without a doubt that this has done a great deal to create happy home owners," says Mr. Richard Jacobs, Vice President, Roedl-Jacobs Co., Beaver Dam, Wis.



## PROOF OF THE DEMAND

For more than 11 years, growth in the demand for ELECTRIC Ranges has been constant, as this chart shows. There are three times as many ELECTRIC Ranges in American homes now as there were 10 years ago. Every day, more than 3,500 are being installed. They're a selling feature you can't afford to overlook!





# ALL OTHERS IN HELPING SELL NEW HOMES

Why are more *Electric Ranges* included in new homes than any other type? The answer comes from builders themselves. Ask them, and they will tell you "*the Electric Range stands out as a most wanted item*" or "*this has done a great deal to create happy home owners*" as you will see below.

There are many good reasons for this builder and customer preference for *Electric Ranges*. This range can help you sell your homes. It offers customers *modern* cooking equipment—as modern as the other appliances in the house. Women want this kind of cooking because it is clean and economical, and frees them

from drudgery. Some prefer free-standing models, others the built-in type—but whichever they choose, the *Electric Range* is a *wanted* feature.

Install this genuine selling help in any new home you build—large or small—and let it prove that it's worth its weight in sales!

**ELECTRIC RANGE SECTION**  
National Electrical Manufacturers Association  
155 East 44th Street, New York 17, N. Y.

ADMIRAL • FRIGIDAIRE  
GENERAL ELECTRIC • HOTPOINT  
KELVINATOR • MONARCH • NORGE  
PHILCO • RCA WHIRLPOOL • TAPPAN • WESTINGHOUSE



ELECTRIC RANGES HELP SELL HOMES

\*Bureau of Labor Statistics Report—1956



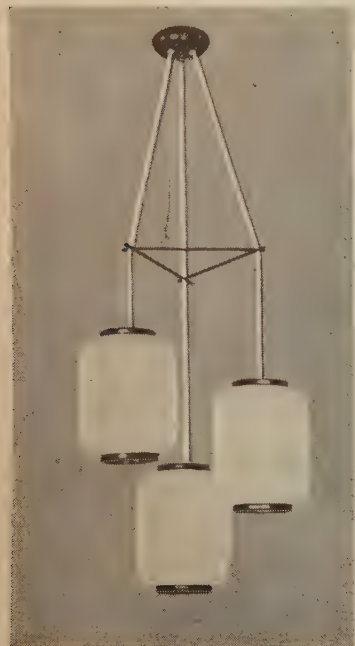
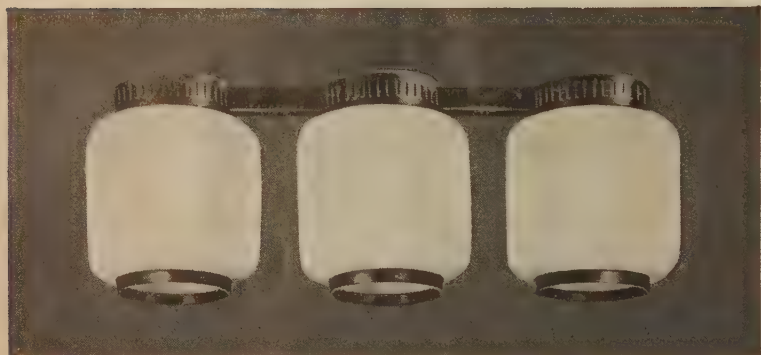
"My customers overwhelmingly prefer electric built-in ranges," says Mr. Jack A. Morrison, builder of Walnut Hills, Mansfield, Ohio. "Along with the other built-in appliances and conveniences in our homes, the electric range stands out as a most-wanted item. We have no sales problems, because we offer the maximum in modern electrical living along with well-designed, soundly built homes. And nowhere are the benefits of electrical living more obvious and salable to our customers than in the kitchen area."







# LIGHTOLIER



THEY REMEMBER  
THE HOUSE WITH FIXTURES BY

Here's a fresh new look in lighting (at a budget-minded price) designed specifically for the needs of the builder. This is a line that catches the eye of your prospective new home buyer and his wife, bears a brand name that leaves a lasting impression of quality and style. It's unbreakable, installs and maintains easily, gives ample glare-free light. That's why it pays so well to install them in your model homes. Another good reason: Lightolier's "custom-tailored" builder merchandising plan. It's a way to have our distributors actually follow-up your prospects for you! Details? Fill out the coupon below.

## LIGHTOLIER

Dept. HH-98  
Jersey City 5, New Jersey

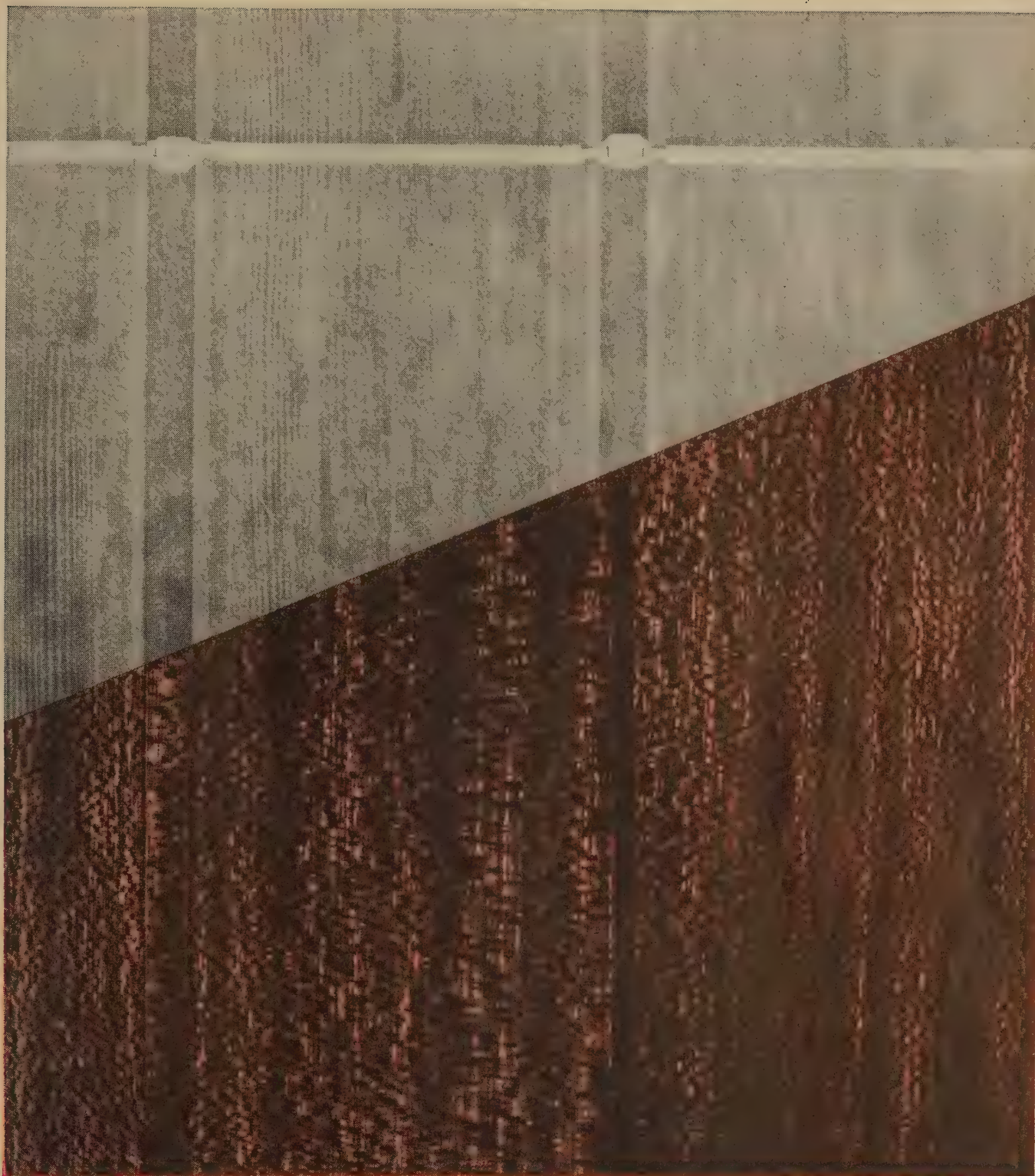
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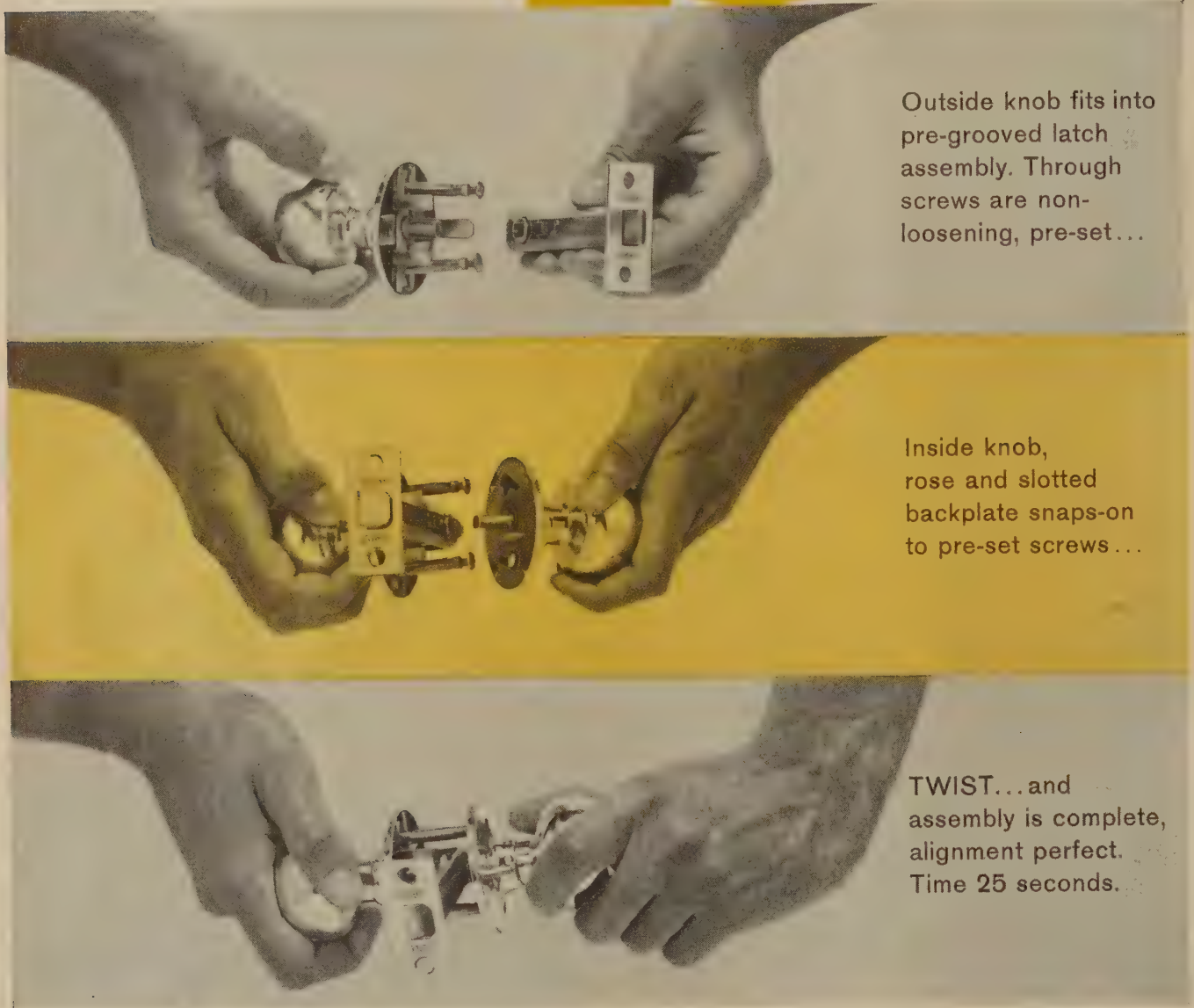
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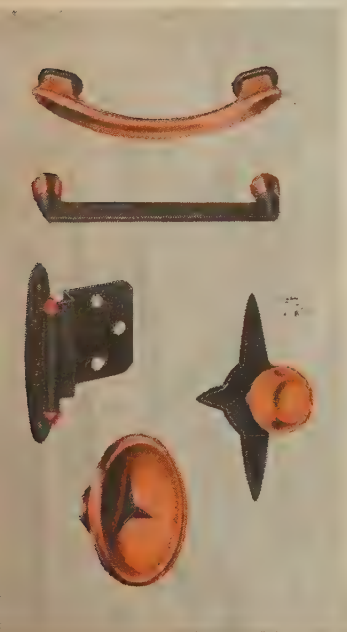
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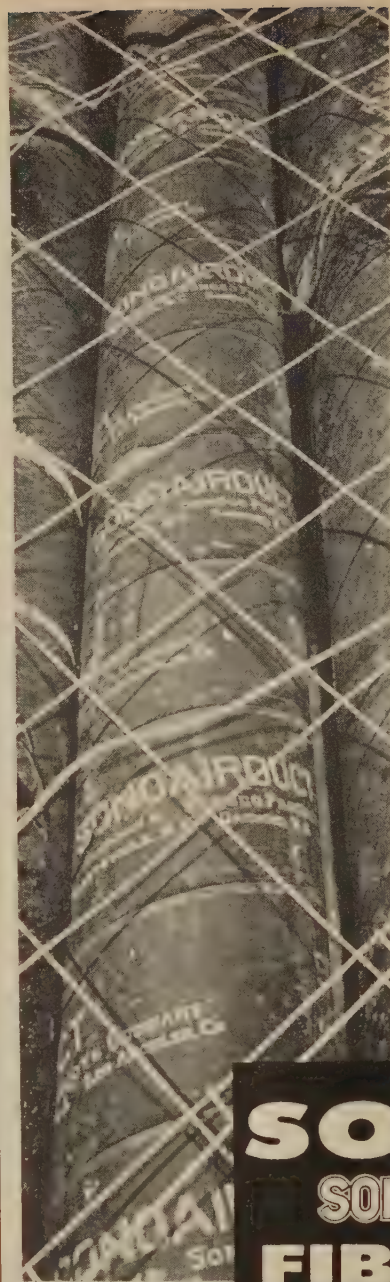
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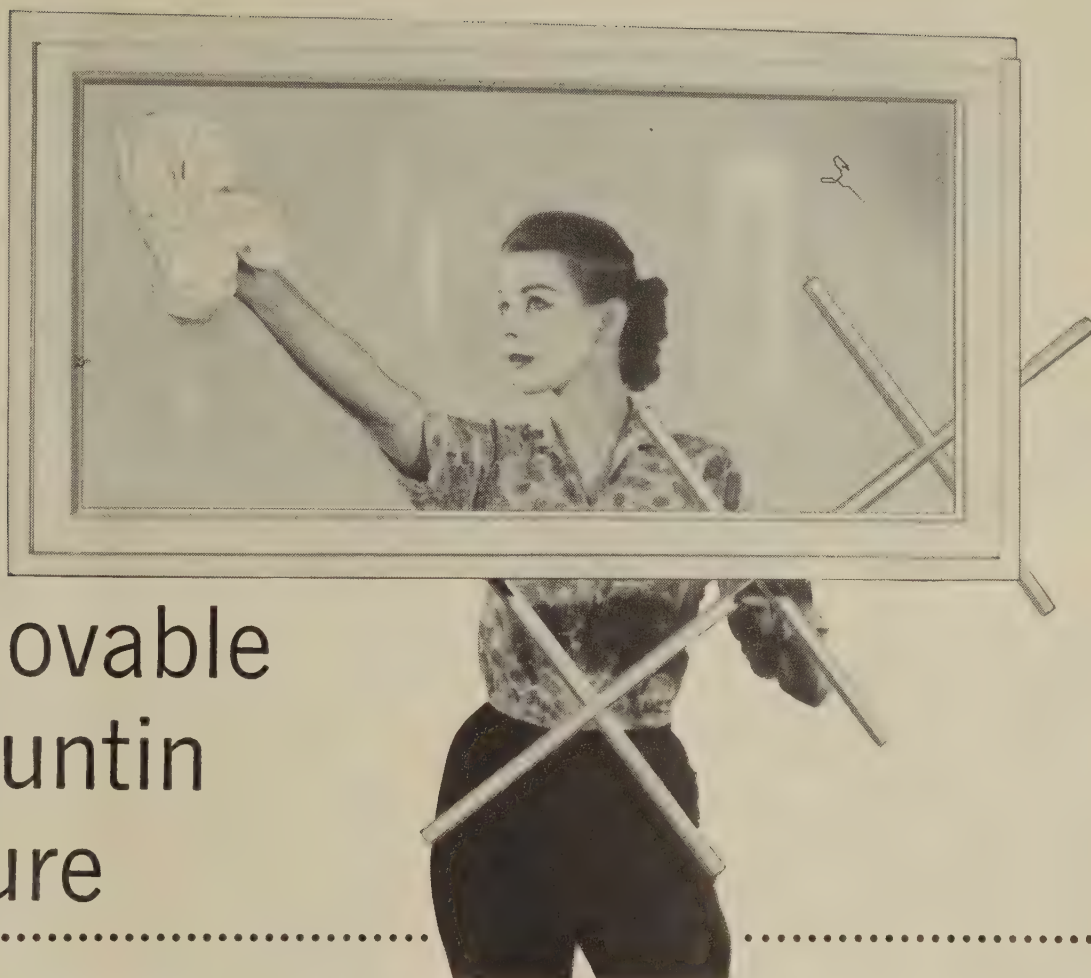
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Mr. DeCesaris stands in front of a house in his attractive Oaklawn development, where G-E remote-control wiring is offered to customers at the same price as ordinary wiring.

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Mr. DeCesaris, current President of The Rhode Island Home Builders Association, is himself building and selling 20 to 25 homes per year, in the \$15,500 to \$25,000 price range.

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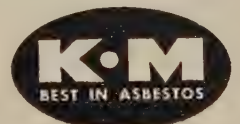
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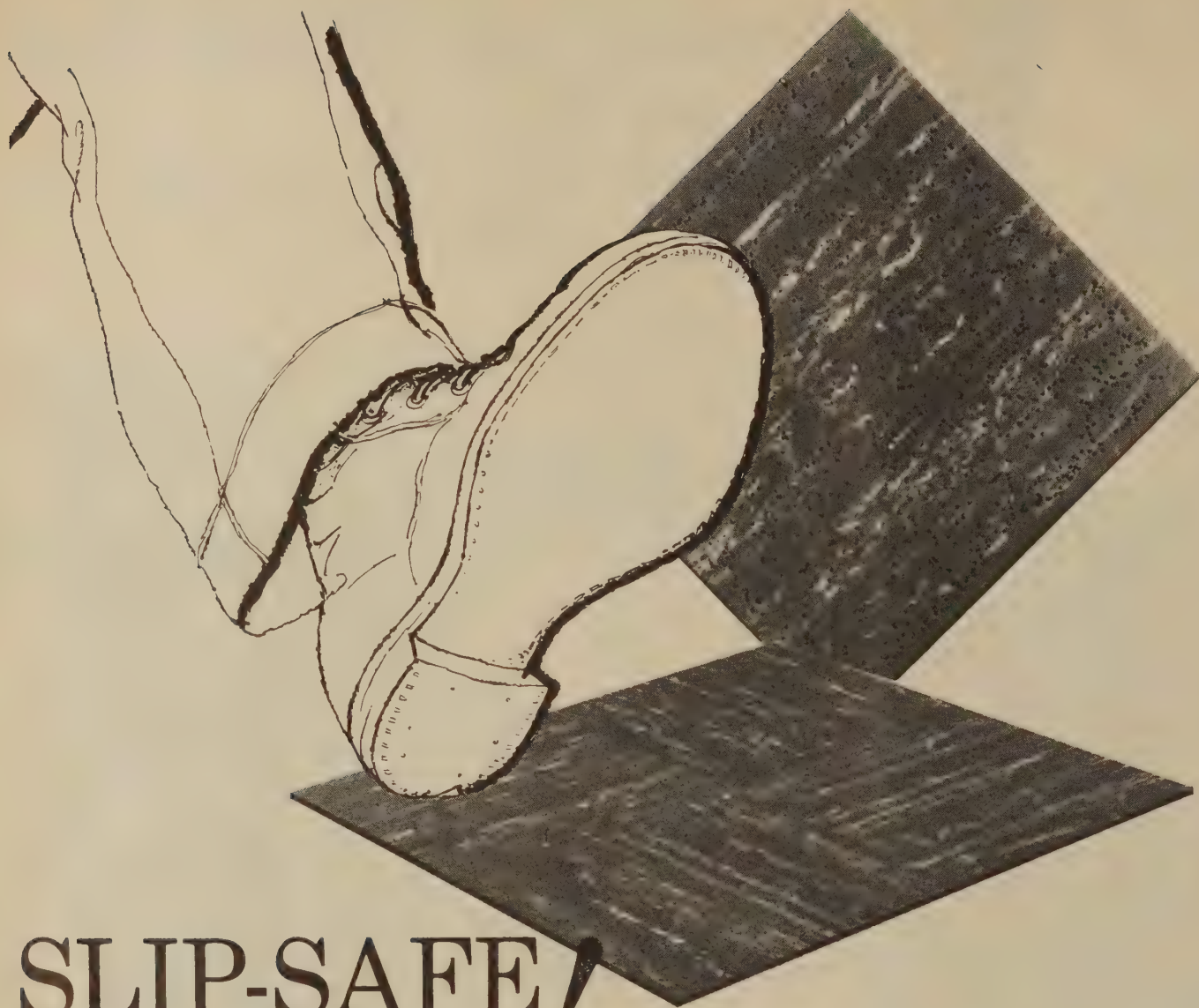
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# Roundup

## Does inflation threaten home building's comeback?

Inflation has replaced recession as the chief concern of the nation's money managers. The Federal Reserve Board showed its concern by authorizing a boost in the rediscount rate and hiking the cash requirement for stock purchases (see p 59). Result of these steps—plus the plummeting bond market—has been a tightening of the mortgage market and fatter FHA-VA discounts.

Congressmen concerned about inflation banded together to defeat the free-spending-and-lending Democratic housing bill (see p 42) and the \$2 billion community facilities bill.

Inflation should be a prime concern for home builders. Materials prices have started back up and labor costs never stopped rising even amid construction unemployment (see p 65). About half the construction labor pacts signed this year run two or three years—with additional increases in the future. This means builders must try to offset added labor and material costs by using techniques to build better and more for less (see p 91). And it adds new importance to research aimed at cost reduction (see p 65).

The danger for builders: higher costs mean higher house prices which could produce new consumer resistance just as housing seems ready to boom again.

## Civil Rights Commission to include housing in first study

The new Civil Rights Commission, which has taken a year to get itself moving, pulled one surprise in its first announced study. It will include discrimination in housing in its first effort, along with education and voting. The commission is setting up advisory groups in each state and preparing a handbook for guidance. The complete report is to be submitted to Congress and to the President Sept. 9, 1959. It seems certain to focus a new light on the entire problem of segregated housing.

## Labor seeks more time to end closed shop deals

Local labor contracts by the hundreds are being revised to get rid of closed shop provisions. But so many still do not comply with NLRB requirements that the AFL-CIO Building Trades Dept last month asked for an extension of the Sept 1 deadline. Lawyers in one national union office worked through a pile of 3,000 contracts, had revised 1,000 of them by mid-August.

Labor experts agree NLRB will enforce its closed-shop ban by applying the Brown-Olds remedy if necessary (April, News). This means builders would be jointly responsible for refunding all union dues paid under a contract with illegal closed shop clauses (builders would have to pay alone if the union is out of funds). NLRB has said informally it will not go looking for offending contracts, but will wait for complaints. But an AGC aide warns: "The penalties involved are big enough so this may look like a lucrative field to unscrupulous lawyers."

## FHA to brief field directors on urban renewal

FHA's 75 field office directors will meet with central office brass in Washington for a week beginning Sept 15. The meeting, first since 1954, was called in hopes the directors could be briefed on what the 1958 housing act would mean to FHA. The field men are also scheduled to get a thorough indoctrination in urban renewal. This results from many complaints that FHA directors are so preoccupied with residential work in the suburbs they neither promote nor have a thorough knowledge of FHA's urban programs—notably Secs 220 and 221.

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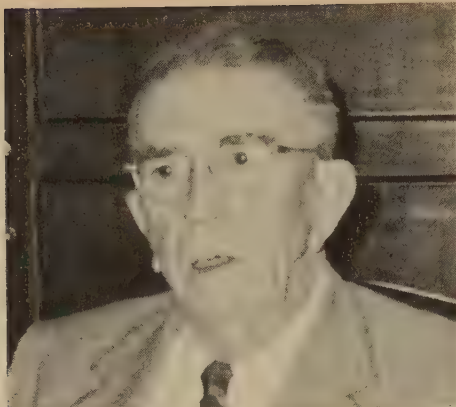
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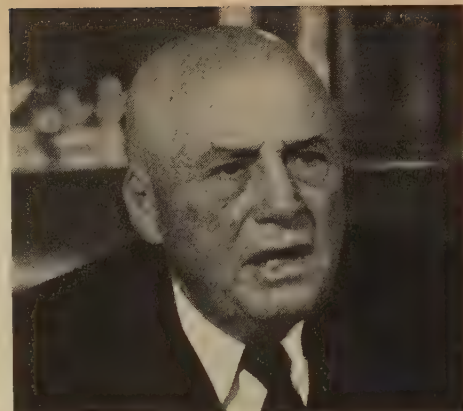
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Their determined  
but divergent stands  
explain why  
Congress voted . . .



**CHAIRMAN SMITH OF RULES**  
*He bottled up the House bill*



**SPEAKER RAYBURN**  
*He could not permit amendments*

## ... no Omnibus Housing Act for 1958

For the first time in ten years, Congress has adopted no comprehensive housing law. Whether this will be more of a blessing than a curse remains to be seen. Many of the propositions that seemed likely to stay in the legislation involved needless new federal spending, loans or subsidies. But FHA spokesmen fear they will run out of insuring authority before Congress reconvenes, despite the \$4 billion increase voted in June. Ordinarily, \$4 billion would last easily a full year. But the lowest-ever FHA down payments enacted as an anti-recession move in April have produced a big spurt in FHA business. How other major housing programs stand:

**Fanny May** will probably run out of money to buy FHA and VA loans (at par) on homes under \$13,500 in the fall. Only \$275 million of the \$1 billion Congress voted in April remains unallocated. But the government mortgage agency has ample funds for all its other activities.

**Public housing** has a 35,000-unit authorization for this fiscal year—double the number of units PHA put under contract last fiscal year and comfortably more units than public housers actually started (25,460) during 1957.

**Urban renewal** can keep going until Congress reconvenes with \$100 million the President has in reserve, plus \$50 million in unallocated grants.

**College housing** loans face sharp curtailment (HHFA has less than \$50 million left). But the industry will shed few tears for this program of subsidized loans at below-the-market interest rates.

Defeat of housing legislation reflects a growing feeling in Congress that the No 1 national problem is now inflation—not recession.

Faced with the unwelcome necessity of raising the national debt limit, Congressmen reacted against big public spending and lending. Capitol Hill observers also note a rising awareness of how the appropriation committee's control over money has been eroded by obligational authority programs (like urban renewal, public housing, other loans) that give Congress no year-to-year check over outlays.

Accordingly, the House rejected its own version of the Senate-passed community facilities bill, an anti-recession measure which would have authorized up to \$2 billion in loans for public works.

### Third defeat for Rains

Rep Albert Rains (D, Ala) chairman of the House housing subcommittee, sliced the dollar authorizations in his bill from \$2.4 billion to \$975 million before bringing it to the House floor. But even this gesture toward economy failed to win enough support—a fact which gives Rains the dubious honor of having his housing bills in the last three sessions rejected by his own colleagues.

Will home building suffer as a result of not getting a housing bill this year? NAHB President Nels Severin warned direly while the bill was pending that no bill at all would be calamitous. Armed with telegraphic reports from 15 home builder associations, he told reporters house sales are way up and materials producers are rehiring to meet home building's needs, added: "Builders all over the US are making plans but unless the industry gets this bill they would not be inclined to go ahead."

Housing economists scoff at Severin's alarms. "Killing this bill won't make \$10 worth of difference in the amount of construction put in place this year," says one. "Next year, there will just be a little less public housing."

### What home building lost

The industry did lose a dozen semi-technical amendments which would have made FHA and VA work better. The key changes would have:

- Boosted the maximum insurable FHA mortgage from \$20,000 (to \$22,500 in the Senate bill and \$27,500 in the House bill) and upped amortization to 35 years.
- Lifted the limit on FHA and VA mortgages

Fanny May can buy from \$15,000 to \$20,000.

- Made builders eligible for the same high ratio FHA mortgages as owner-occupants on homes they take in trade.
- Increased mortgage limits on Sec 207 and 220 rental housing and 221 relocation housing.
- Killed the one-half per cent differential between the VA and FHA interest rates.
- Set up a new Sec 229 for aged housing, letting profit-seeking firms into the picture for the first time.

### The 90 % mortgage plan

Dead, too, is the US Savings & Loan League's controversial plan to have a new federal corporation co-insure the top 25% of otherwise 90% conventional mortgages.

Indeed, it was this plan which seemed to be the prime target in the Administration's fight to prevent passage of the House bill. While HHFA Administrator Albert M Cole charged that the \$2.4 billion House bill would be inflationary and bring higher costs, he reserved his sharpest criticism for the S&L plan which would cost the taxpayers nothing. He complained it would favor S&Ls, "would protect the lender without affording adequate



protection to the consumer and would seriously undermine the mortgage operations of other lenders."

The US S&L League argued there is a real need for another high percentage loan plan. Rains was convinced, if Cole wasn't. He pledged his support to the end and included the 90% plan in the revised bill he brought to the House floor to its defeat.

### What home building gained

Failure of Congress to agree on a bill did halt moves to put more government money into housing subsidies—a step which is always at the expense of the unsubsidized (ie private) sector.

Dead for the present is the Senate's big revamping of the public housing program which would have deprived PHA of budget control of local authorities and let them set rents high as possible while still "meeting low-income needs."

Stopped also are Senate and House efforts to butter up the big city mayors by big boosts in urban renewal funds. The Senate bill authorized \$300 million a year for six years; the House bill \$500 million for one year. The Administration asked \$225 million a year for six years. Both houses ignored the President's proposal that the federal government gradually reduce its share of and write-down costs.

### Par purchase continues

While the fate of the housing bill was still in doubt, the year-old legislative requirement that Fanny May pay par for mortgages bought under its special assistance programs expired. Both Senate and House bills would have extended it one year.

The Administration dislikes this kind of hidden subsidy. So it seemed probable on Aug 7 that FNMA would cut prices on its special assistance purchases despite a plea from NAHB to keep them as is.

Surprisingly, FNMA's directors *did* vote to continue par commitments. The logic: Cole, board chairman, realized that a cut in the special assistance price might result in more pressure behind the stalled housing bill. But it appeared likely in mid-August that after Congress adjourns, the price will be cut.

### The day by day story of housing bill's death

Here's how the 1958 housing bill died:

**July 24:** The House banking committee reported out its bill, sent it to the rules committee for clearance to the floor.

**July 25:** HHFA Administrator Albert M Cole called a press conference, angrily stamped the bill as "a \$1.75 billion Christmas tree loaded for the benefit of everyone in sight—with one exception . . . the taxpayer who is going to have to pay for it." He hinted a Presidential veto was likely if the bill passed.

**Aug. 1:** Rep Howard Smith (D, Va), chairman of the rules committee, let it be known he shared Cole's view. He refused to call his committee into session to consider it, went off to work on his farm.

**Aug 6:** NAHB President Nels Severin warned a press conference that failure of Congress to pass a bill "would have very far-reaching and detrimental effect on the home building industry." Industry lobbyists, with many pet provisions in the House bill, stepped up efforts to get the bill out of the rules committee.

**Aug 12:** Big city mayors called on Speaker

Sam Rayburn, pleaded with him to force the bill out of committee. Their interest: federal grants for urban renewal. Rayburn said only that he would try.

**Aug. 14:** As hope waned for any action, Senate Majority Leader Lyndon Johnson told newsmen Congress would not adjourn until a housing bill had been enacted.

**Aug 15:** Speaker Rayburn announced the housing bill would be taken up on the House floor under suspension of the rules. This meant it would require a two-thirds vote of those voting for passage and no amendments would be allowed. He said also he would not recognize anyone to introduce a substitute bill, as happened in 1956 and 1957.

**Aug 18:** Rep Albert Rains, chairman of the House housing subcommittee, watered down

## Conduit tax bill for realty trusts killed in House-Senate conference

Conduit tax treatment for real estate investment trusts has again been rejected by Congress.

The measure was put in a massive technical tax amendments bill passed by the Senate. But it was not in the House version. In a Senate-House conference, the provision was killed.

Its defeat surprised backers of the legislation. Two years ago, Congress approved a similar bill only to have it vetoed by the President. This year's version, which limited the tax break to passive trusts (and excluded operating trusts), was believed to have overcome the President's objections.

The measure would have given real estate investment trusts the same tax benefits as a trust which invests in securities, letting them pass on earnings to their investors without first paying a corporate income tax. Without this tax break, it is impossible for real estate trusts to compete with other forms of investment. The yield from equities or mortgages is simply not high enough after half the profits are given to the government.

his bill cutting its dollar authorizations from \$2.4 billion to \$975 million in an effort to win more votes. But the ayes fell six short of the required two-thirds. For the bill: 251 (185 Democrats and 66 Republicans). Against: 134 (111 Republicans and 23 Democrats).

Rep Edgar W Hiestand (R, Calif) had a bare bones bill ready eliminating all new lending programs and extending present ones at about the same rates. The Administration announced it would accept this bill. But Rayburn refused to recognize Hiestand to introduce it.

**Aug 19** to the end of the session: efforts continued in both the Senate and the House to work out a compromise bill and slip it through by tacking it onto another major piece of legislation. None succeeded.

Supporters of conduit tax treatment for real estate trusts—chief among them NAREB and MBA—have contended that the device would produce millions of dollars of needed equity money for rental housing.

The technical amendments to the tax bill contain two provisions of help to builders:

**1.** The small business amendments provide that if a business has a bad year the loss can be carried back three years to offset income in those years. The old law allowed a carry-back of a 1958 loss to 1957 and 1956; now a small business can carry up to \$50,000 of the loss back to 1955 as well. This would mean an immediate cash recovery of up to \$26,000 at the 52% corporate tax rate.

**2.** The bill also provides that when the estate of a deceased businessman consists largely of an interest in a closely held business, the estate has up to 10 years to pay federal inheritance tax. This would overcome the necessity in many cases for liquidating a family business just to pay the estate taxes.

## Senator attacks FHA bargain sales of repossessed apartment projects

FHA's disposition program for repossessed apartment projects has come in for bitter criticism on the Senate floor.

At one point Sen Olin D Johnston (D, SC), even called the sales program a "national scandal." His charge touched off a brief investigation by the Senate banking committee, which reported it could find nothing wrong.

Johnston charged that FHA was selling three 608 projects in South Carolina at ridiculously low prices. He also complained that advertisements of the sales were placed in four daily newspapers but not in any paper in the counties where the projects are located. He said he believed if they had been "properly advertised," much higher bids would have been received. The three projects:

Cherokee Heights in Gaffney, S C, 100 units with an original mortgage of \$426,000, sold to Christian D Padgett of Gaffney for \$43,000; Brookside Court, Greenwood, S C, 60 units, with an original mortgage of \$367,000, sold to Padgett for \$20,000; Irene Apartments in Gaffney, 50 units, with an original mortgage of \$239,100, sold to H M Arthur and L H Jen-

nings Jr of Union, S C for \$51,051.

FHA explained to banking committee investigators that it had acquired these properties in 1953, found that it had no better luck than the original owners in operating them at a profit. Under the ill-fated 608 program Congress did not require FHA to find long range economic value in fixing loans.

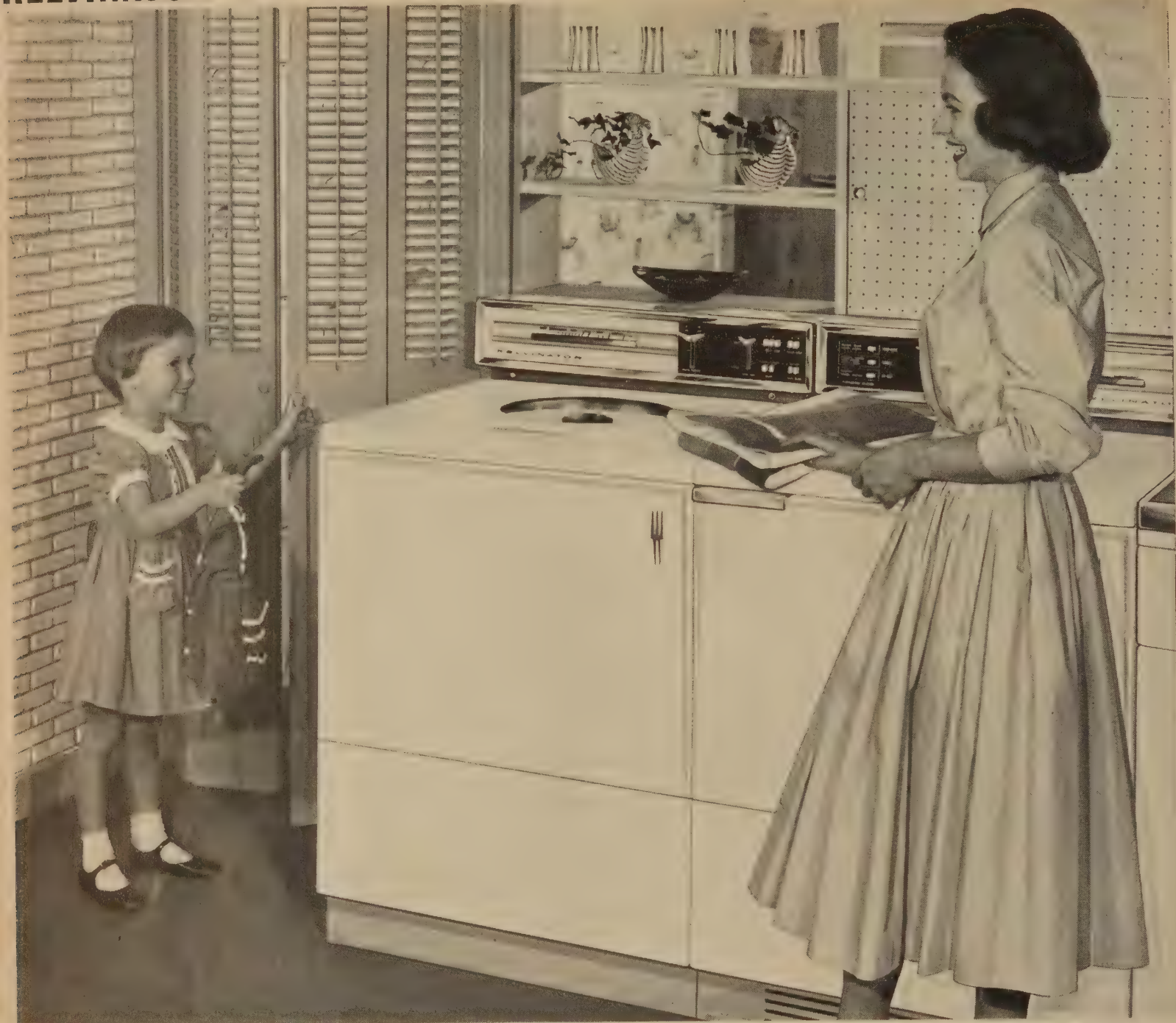
Rather than take back a mortgage and remain involved, FHA recently has been selling more of the old 608s for cash. This has let some investors buy at a price so low they could cut rents in the projects to a level where the local market would support them.

But in cities where there is a strong rental housing market, FHA still takes back a mortgage—thus invariably gets a higher price.

As of March 31 FHA had taken over 613 projects (48,000 units) under all its rental housing programs—467 of them 608s. It had paid out \$313,560,000 in debentures plus capitalized expenses. It had sold 289 projects (20,412 units) for \$124,073,053, a loss of \$34,232,726. *NEWS continued on p 45*



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HOUSE & HOME



## HOUSING MARKET:

## Housing's comeback plays big part in leading nation out of recession

"Recent statements by government officials and members of Congress have suggested that home building may be the bellwether industry which will lead us out of recession."—NAHB President Nels Severin, speaking on May 11.

Home building may not be leading the economy out of recession, but there is no longer any doubt that it is the most sturdy of several crutches.

Starts reached 111,000 in July (107,300 of them private), for a seasonally adjusted annual rate of 1.16 million, highest since January 1956.

No less an authority than the Committee for Economic Development concedes that home building is the economy's "ace in the hole." In charting the history of three recessions (see graph above) CED notes that housing has pulled out of this recession slower than in three previous economic downturns, but its present recovery is a potent influence on the upward trend of the entire economy.

**FHA and VA applications indicate home building's recovery will continue through the fall.**

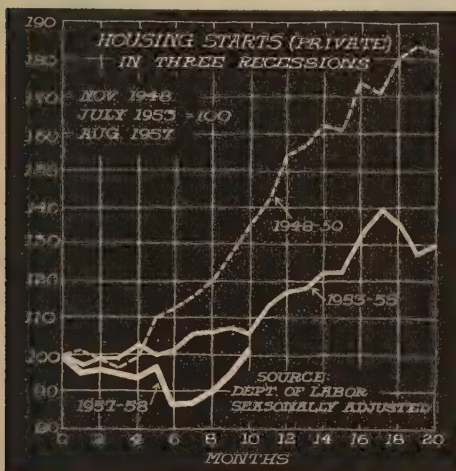
FHA applications on new units totaled 37,856 in July, 31,771 of them single-family homes. This was down slightly from June but 72.8% over July, 1957. VA appraisal requests on new homes reached 28,510, up 0.4% from June and 103.5% from July 1957.

And to support these encouraging reports are several stories of fabulous sales success (see p 51) and many more signs that buyer confidence is returning. A University of Michigan survey of consumer attitudes shows an end to the slide in consumer confidence which hurt sales of all durable goods, including homes, for two years. The confidence indicators have turned up.

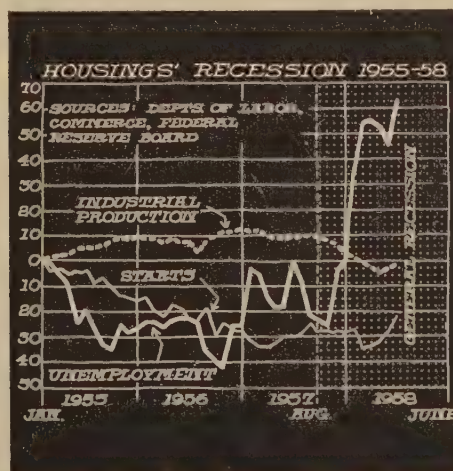
Builders have noticed it. Says one in Charlotte, NC: "The thing that really counts is that nobody's talking tight money anymore. That's what scared buyers off."

**Home building is also a key factor in what is beginning to look like one of the nation's biggest construction booms.**

Combined with big increases in public utilities and public works construction, home building helped push construction contracts in June to \$3.8 billion, the highest figure ever reported in one month by F W Dodge. Contracts were 12% above the previous high set in May and 18% above June of 1957. Dodge found June contracts for residential building alone up 20% from June 1957.



**HOME BUILDING'S** performance during three national recessions, charted by the Committee for Economic Development, shows that the industry is now making a strong recovery, though it took longer than in the previous two post-war recessions. CED has started with an index of 100 at the beginning points of the general recessions, thus starts with a seasonally adjusted rate of 1,056 million for August, 1957. This was two years after money began to tighten, starts turned down and home building found itself in its own private recession. (See graph at right.)



**CURRENT RECESSION** began much sooner for home building than for the rest of the economy (as comparative figures above show). Seasonally adjusted rate for private housing starts was 1,416 million in January 1955, started dropping rapidly in September, continued to drop until the low point was reached last February, 35.4% below the high. Industrial production did not begin to fall rapidly until October 1957, hit its low last April. Unemployment's low point was October 1956, when housing was down 25.7%. It edged up in June, 1957; zoomed up in December '57.

## MARKET BRIEFS

### What women want (cont)

Interest continues strong in what women want in homes. Women's housing conferences have been held in Washington the past two years\*. This year there will be two more:

- *McCall's* magazine will sponsor its second conference Oct 7-9, when 100 delegates will discuss "family planning for the future." They will be asked whether they plan to buy a new home or remodel during the next few years and what remodeling they would do.

- NAHB is joining with a new organization—United Industry Committee for Housing, which is supported by manufacturer groups—to sponsor another conference of 100 women Oct 14-16. It has the frank "primary aim to stimulate interest in home ownership." Delegates will be chosen from essay contests sponsored by NAHB locals to tie in with National Home Week (Sept 6-13). The 50,000 to 100,000 expected entrants must fill in questionnaires to be analyzed for a new consumer preference survey. Findings will be published later.

### National has biggest month

National Homes' record-setting second quarter pace has carried over into the third quarter.

The company produced 2,650 units in July, the best single month in its history and its first \$1 million month (in pre-tax earnings). And production is still trailing sales.

Biggest seller is still the low-cost Fairlane series, accounting for 65% of all sales.

### The HHFA story

HHFA has decided to tell its story to the public with a movie.

A \$32,000 contract has been awarded to Dynamic Films Inc of New York to produce a motion picture to:

1. Explain and portray how the government housing programs work together.
2. Explain how they are geared to the community and to the free enterprise system.
3. Show how various housing aid programs work on the local level.

HHFA brass think the film will show local communities, and particularly business groups in little towns, how urban renewal works.

The Veterans Administration is also making a movie to tell the story of its work to the public—but it will cover all VA programs, not only loan guaranty on housing.

### Americans on the move

Fortunately for the home building industry, the American people continue to move from one place to another in large numbers.

Census reports 31.8 million persons—one of every five Americans—moved from one home to another between April 1956 and April 1957. Two thirds of them stayed in the same county. Of the other third, half moved into another county and half moved to another state.

Proportion of mobile persons is highest in rural-nonfarm areas—21.7%—and lowest in the rural-farm areas—13.9%. Young adults—20 to 24-years-old—are the most mobile; 41%

continued on p 47

\* Sponsored by HHFA (H&H, June '56) and *McCall's* magazine (News, Nov '57).





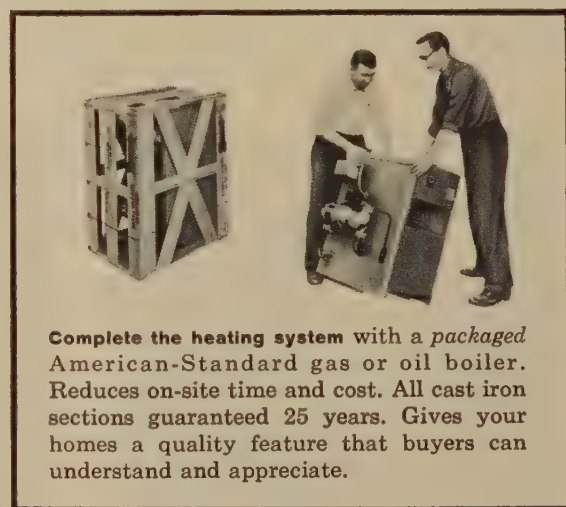
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PLUMBING AND HEATING DIVISION



moved in the test year. Nonwhites moved more than whites—22.2% vs 19%. But more of the nonwhite movement was of a short-distance type; 80% of the mobile nonwhites stayed in the same county vs 66% of the whites.

However a greater proportion of nonwhite movement was interstate, particularly among migrants to urban areas; 70% of the non-white vs 60% of the white.

### Cashing in on Sec 221

A group of specialty contractors have organized to fix up old homes in Washington, DC under FHA Sec 221. As Workshop 221 Inc, they will offer a package deal to people who "wish to purchase a residence under \$10,000 without downpayment."

Sparkplug of the group is John Haas, executive secretary of the Metropolitan General Improvement Contractors which recently seceded from NERSICA, national fixup group. Haas organized Workshop 221 after he read about the "neglected FHA goldmine" in *HOUSE & HOME* (July, News). Says he: "The market is good. About 3,500 units have been authorized [by HHFA] in Washington. Less than 20 have been completed."

### Processing jam worsens as money bill is vetoed

FHA has been caught in a new processing jam just as it seemed on the verge of getting out from under the record flood of applications.

The problem: President Eisenhower vetoed the independent offices appropriation bill\*, leaving FHA with no funds. FHA and the other offices involved in the bill have been allowed by Congressional resolution to continue operating and keep spending at the same rate as before but without overtime.

Commissioner Norman Mason promptly wired the 60 offices where overtime work had been authorized, ordering them to end it, regardless of the processing backlog.

The veto also stymied a \$4.6 million supplemental appropriation for FHA, which seemed assured of quick passage by Congress. All but \$100,000 of this money would be used to bolster the FHA field offices. Legislative leaders decided, however, that since this was a supplemental bill, it could not technically become law until the original appropriations bill which it would supplement was enacted.

In mid-August there was little doubt that Congress would eventually re-pass the appropriations bill, deleting the item which prompted the veto. But in the meantime FHA offices throughout the US were losing ground again.

Field reports show the Miami field office in much the worst shape—nine weeks behind in processing. Tampa is eight weeks behind. In late July FHA sent a 16-man task force from Washington to Miami for three weeks to help.

Big problem in Miami, Tampa and other offices where backlogs are running four to five weeks is the shortage of appraisers who will work for FHA. Fee appraisers are limited to existing house appraisals only, leaving all proposed units for staff men. A large bite of the supplemental appropriation is to be used to hire more staff appraisers—if they can be found at FHA's low pay scale.

\* The President vetoed the bill not because of any objection to FHA's budget but only because he did not want to approve a \$589 million appropriation for the Civil Service Retirement Fund.

## Certified Agency Program expansion due as FHA reviews its success

FHA is taking a fresh look at its little Topsy—the fast-growing Certified Agency Program.

Commissioner Norman Mason has named a staff committee headed by General Counsel George K Bickford to study the 10-month history of the program, then make recommendations for its future.

That the program will be expanded is certain. The real question is how fast. CAP was started in parts of six insuring districts last October, now is being used in 20 (though usually limited to cities of 15,000 or less).

Mason has already earmarked for CAP central office expenses \$100,000 of his requested \$4.6 million supplemental appropriation. (CAP's present staff in Washington consists of Director Graham Northup, an assistant and a stenographer.) Mason has also notified directors of every office where CAP has been authorized that they are "responsible for enlisting the active interest of the home building and financing industry."

Under CAP, a certified agent can process applications use fee appraisers and inspectors, refer the case to the proper FHA field office only for insurance endorsement. Its use so far has been heavy on existing houses. One reason: on new construction no builder can have more than five CAP commitments outstanding.

The limit of five applications at one time irked some builders who tried to buck the rule by getting commitments in the names of qualified buyers. (One got 19 loans this way.) But for now FHA means to keep CAP for small builders, will crack down on those who try to get round the five-home limit.

### A list of successes

Big reason for CAP's quick success has been fast processing—as little as two days in some cases, typically one-to-two weeks. And delighted FHA officials point out it has:

- Brought in builders in small towns who were too far from a field office to bother with costly delays of FHA applications.

- Attracted small builders in bigger centers who found CAP's simplified procedures better suited to their operations.

- Interested lenders who did little or no FHA business before. One FHA official suggests S&L may get to like CAP so well they decide it makes their co-insurance plan unnecessary—if the interest rate stays competitive.

- Shown a way to cut through log jams which pile up in FHA offices when there is an unusual spurt in starts.

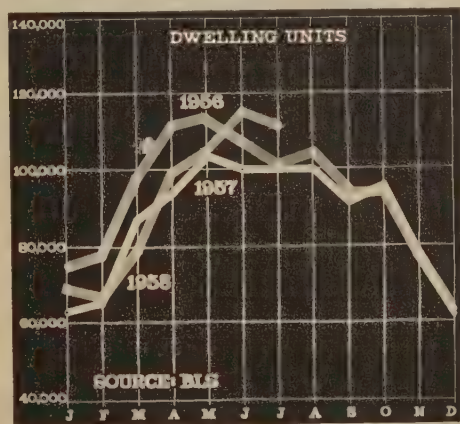
- Produced 5,020 commitments. Of these 707 were for new homes; 4,313 were for used homes; 1,190 have completed closing.

### Major trial in Denver

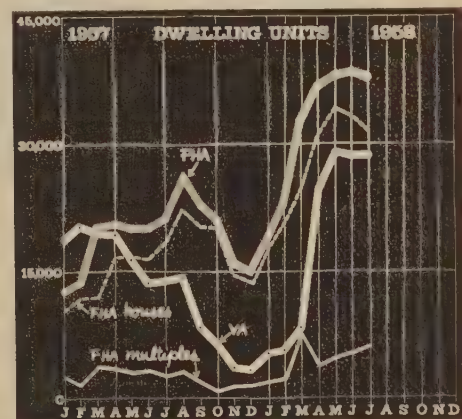
Denver is a test case to see how CAP works in a big city. And builders, realtors, lenders and FHA are enthusiastic over the results. Says Charles F Warden, local FHA director: "Business is way ahead of last year; we feel the CAP program is actually extra business. It is encouraging new mortgagees, bringing old ones back."

From April 16, when CAP started in Denver, to July 31, there were 2,584 applications in Colorado—1,836 from metropolitan Denver. Of these, 239 have completed closing. In the same ten-week period there were 3,268 regular FHA applications in the state. And Colorado accounted for 30% of all CAP commitments (1,499 out of 5,020).

Big volume is in used homes (2,225 of the first 2,584 applications). "It takes about half as long (2½ weeks) to close a deal as it does through the local FHA office," says Realtor Lane Jorgenson. "And we can iron out minor wrinkles immediately." Builders like CAP too. "We can get started on a house within one week where it would previously take at least a month," says Builder John Crawford. For lenders "it gives more responsibility and an opportunity to be more competitive with service," says Assistant Vice President Allen Bradley of Mortgage Investment Co. *NEWS continued on p 49*



**HOUSING STARTS** totalled 111,000 in July (107,300 private, 3,700 public). This was a decline from June (by 3.5%), but a 14.3% increase over July last year. Private starts were up from June and hit a seasonally adjusted rate of 1.16 million a year—best since Jan. '56. For the first seven months of 1958, total starts (645,000) are up 5.4% from last year; private starts (605,200) are up 4.5%.



**FHA & VA APPLICATIONS** on new homes were off 2.5% in July from June; but the seven month total is 41% ahead of last year. FHA applications on new units were 37,856 in July (31,771 homes, 6,085 projects). This was off 2% from June but 78% ahead of July '57. July VA applications on new homes were up 0.4% over June (28,510 vs 28,391, and a whopping 103.5% above July last year.



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## Operative builders grab bigger share of 1-family house market, BLS finds

Operative builders are starting 80% of all the professionally-built one-family homes in the US—and their proportionate share of the market should increase as the market itself expands.

This is the obvious conclusion to be drawn from a new report published by the Bureau of Labor Statistics in its official *Construction Review*. The report is based on figures gathered in BLS' 1955 and 1956 first quarter studies of the characteristics of nonfarm housing compared to its 1949 study on the organization of the home building industry.\*

In 1949, professional builders started 66% of all new one-family homes. Operative builders accounted for 62% of these starts. By 1955, professional builders had boosted their share of the market to 85%. Operative builders had grabbed 82% of this or 70% of all one-family starts. Details:

PERCENT DISTRIBUTION OF NEW PRIVATE NON-FARM ONE-FAMILY HOUSES  
BY TYPES OF BUILDERS

	1949	1955, first quarter	1956, first quarter
All builders .....	100%	100%	100%
Owner builders .....	34	14	16
Professional builders .....	66	85	83
General contractors ..	16	15	16
Operative builders ...	41	70	67
Operative builders—			
general contractors..	9	—	—
Unknown .....	†	1	1

† Less than one-half of 1%.

Professional builders have become most dominant in metropolitan areas where seven out of every ten new houses are built. Their share of all single-family net starts rose from 81% in 1949 to 90% in 1955. Of these totals, operative builders were responsible for 81% in 1949 and 86% in 1955.

The significant fact is that the operative builders' share of the market has been highest in home building's biggest years. Explains BLS: "The high proportion of houses constructed by all operative builders as a group in 1955 coincided with the period of peak volume of housing begun under the VA-guaranteed home-loan program and comparatively large volume under the FHA-insured mortgage program."

BLS found that operative builders' share of homes started by professional builders had slipped to 72% in October 1956 when FHA-VA starts were down. But extending this pattern to this summer's FHA-VA boomlet, it is apparent operative builders are again accounting for a larger share of single-family starts. As volume goes up, their share of the market should rise, too.

BLS also notes a substantial shift from owner- to professionally-built homes in the nonmetropolitan areas where owner-builders have been most common in the past. From 1949 to 1955, the number of owner-built houses shrank from 62 to 22% of the total.

\* The 1949 and 1955-56 studies differed in one respect: 1955-56 figures are derived from interviews with builders who started the houses covered in the study (37,000 units in 1955 and 28,500 in 1956). Tabulations show the builder's role for a specific unit, though he may have built other housing. The 1949 survey covered each builder's entire operations for the year.

### What is a builder?

Here is BLS's definition of terms used in its builders' study:

**Owner-builders:** Those who build for other than commercial purposes, without the services of a general contractor but possibly with the aid of subcontractors.

**Professional builders:** Those who build for a living or a profit. *There are two kinds:*

**General contractors:** Those who build housing to order on someone else's land and to another's specifications. (Also called custom builders.)

**Operative builders:** Those who build housing on their land to their own specifications for unidentified future buyers or renters. (Also called merchant builders.)

(In met areas, the proportion dropped from 19 to 14%.)

Operative builders were most dominant in the big \$10,000 to \$20,000 price range—starting 85% of all such professionally-built single-family houses in 1955-56. They also accounted for 83% of those under \$10,000 and 65% of those over \$20,000.

Owner-built houses are commonest at prices below \$10,000 where the market is least enticing to producers. General contractors got their biggest share of starts in homes priced over \$20,000.

PERCENT DISTRIBUTION OF NEW PRIVATE NON-FARM ONE-FAMILY HOUSES BY BUILDER & PRICE CLASS 1956

Percent distribution by type of builder	Owner- build- ers	General contrac- tors	Oper- ative build- ers
All selling prices.....	16	16	67
Less than \$10,000 ...	24	14	62
\$10,000 to \$11,999 ...	15	13	72
\$12,000 to \$14,999 ...	12	13	74
\$15,000 to \$19,999 ...	16	13	71
\$20,000 and over ....	18	28	54

BLS comments that operative building was not necessarily large scale—e.g. only 6% of operative builders started 25 or more houses in 1949. (But this 6% [3,000 builders] accounted for 65% of the professionally built houses that year.)

### New study of Capehart program asked in House

The House appropriations committee has asked for a thorough restudy of the Capehart military housing program.

Reason: the congressmen fear the government could be saddled with a huge mortgage burden on vacant Capehart units.

In an acidly worded report, the committee commented: "Defense officials seem oblivious to the fact that the rapidly changing concepts of the military posture of this country could easily result in these housing projects becoming empty in future years with the federal treasury holding the responsibility for paying off the mortgages." The report is due when Congress reconvenes Jan. 15.

## PUBLIC HOUSING:

### PHA backs down in fight with Chicago authority

The Chicago Housing Authority has called the bluff on the Public Housing Administration and won.

Six months ago PHA accused CHA of wasting \$800,000 a year through make-work, featherbedding and the low productivity of its maintenance crews; plus \$200,000 more through inefficient management (June, News).

In late June PHA followed up this report with a demand that CHA cut \$901,672 from its \$12 million budget. The CHA board promptly met, angrily rejected the demand, accused PHA of "flagrant and unwarranted interference" and threatened a court battle.

PHA quietly sent Abner Silverman, asst commissioner for management, to Chicago to work out a settlement. The upshot:

- PHA withdrew its demand that CHA cut its budget.

- CHA said it had worked out a deal with unions so that skilled men would no longer be doing jobs which could be done by an unskilled worker. Among the job changes: carpenters will no longer adjust curtain rods; plumbers have given up minor stoppage repairs; electricians have given up reading meters.

Says CHA Executive Director Alvin Rose: "We did not lay off anyone."

Just two weeks before PHA retreated in Chicago, it made a similar sortie into Newark and accused the Newark Housing Authority of lax management policies. Specifically, PHA said NHA (among other things):

- Bought two cars which cost \$4,000 more than two cars in the lowest price class.

- Permitted operating costs to exceed revenues on apartments by \$42,000.

- Did not invest money in excess of 90-day needs, thus lost interest over 25 months totaling \$26,000.

- Made arbitrary upward adjustments in insurance costs by \$23,000.

- Permitted a 32½ hour work week.

### New York raises income limits in public housing

Renters in some types of New York public housing projects can now earn more than \$10,000 a year and still not be forced to move out.

The housing authority has raised the income limits 30 to 50% for admission and for continued occupancy in most of the projects it administers—including federally and state subsidized and city projects.

Reason, according to Authority Chairman William Reid: the authority wants to keep families with "drive and initiative" because they exert desirable influences on public housing projects. The old income limits forced many of them to move out "to slums or homes outside the city," he says.

The new income limits let a family of seven stay in a federally-subsidized project with an income of up to \$6,000 vs the old limit of \$4,999. The limit for same size families in state-aided projects was increased from \$6,490 to \$7,800. In some city projects limits were raised from \$6,999 to \$9,936 (plus up to \$150 exemption for pension payments) for families of five or more.

NEWS continued on p 51



**Turn them . . . Stack them . . .  
USE THEM ANY WAY YOU LIKE**



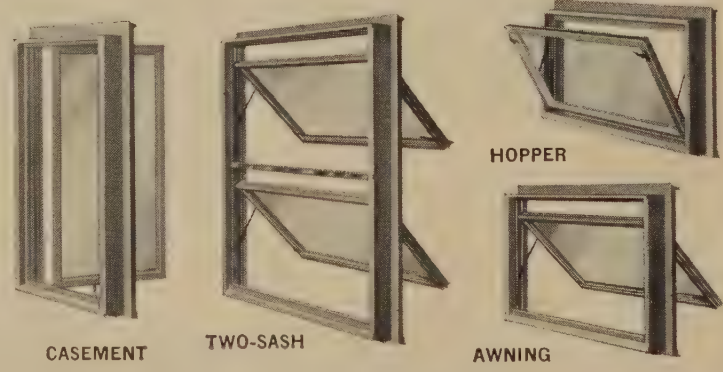
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**IN SAN JOSE** Al Branden sold 484 homes in one week and 792 in one month, all of them on no-down VA financing.



**IN CHICAGO** the Alexander Construction Co of Colorado Springs sold 565 of these National Homes prefabs in one month.

## LOCAL MARKETS: VA no-downs spur huge sales successes in San Jose and Chicago

New house sales have been good this summer—in some cases phenomenal.

A HOUSE & HOME check shows sales have been good enough in nine out of 12 cities to push starts for the first half of the year ahead of the 1957 rate—despite 1958's shaky start. And even in the three cities where starts were still behind 1957, early summer sales were reported good.

NAHB says field reports indicate the big increase is in homes priced from \$13,500 to \$16,000.

**San Francisco:** Despite torrential rains that held up builders for weeks early in the year, housing starts in the nine-county Bay area are up an estimated 18% in the first half of 1958. The Bay Area Council estimates 18,030 houses were started vs the 15,192 in the first half of 1957. Best estimates are that there will be between 35,500 and 38,500 starts this year, well over 1957 but still behind the 45,351 record of 1955.

The phenomenon of the Bay Area is Builder Al Branden who opened his 10,000 home Tropicana Village in San Jose in mid-July. He sold 484 homes in one week, now has 800 under construction. He has six models, priced from \$11,500 to \$14,900.

Bay area builders have gone back heavily to speculative building. Thus an estimated 90% of their houses are not sold when started.

**Chicago:** Though builders have noted a spurt in sales this summer, starts for the year are still way off from 1956 and 1957. Details:

YEAR (1ST HALF)	UNITS	DOLLAR VOLUME
1956	25,233	\$358 million
1957	21,413	\$296 million
1958	17,398	\$253 million

For single family homes the drop is even greater: from 21,378 in 1956 to 15,680 in 1957 to 13,082 in 1958. Ralph Finitzo of Chicago, president of the Illinois Home Builders Assn, concedes that the first half-year was "pretty bad." But he adds: "The market hit the bottom here in May. April and May scared us. But now that fear is gone. Right now sales are ahead of what they were last year at this time. Builders are selling houses now, including those who sold none in May."

Biggest news of the year in the Chicago market has been the success of prefabs, some selling as low as \$12,200—an almost unheard of price in the high-cost Chicago market.

One of the newest and most successful is Hampton Park, 1,035-home tract nine miles north of Joliet. Builder is the Alexander Con-

struction Co of Colorado Springs, the fifth big out-of-state home building firm to move into Chicago in the last two years.\*

Alexander opened the tract with three National Homes models, priced from \$12,200 to \$15,300, June 28. The first weekend orders were taken for 192 homes. By the end of two weeks sales reached 394 and just 30 days after opening they reached 550—70% of them VA no-downs and 30% minimum down FHAs.

This success even startled Alexander. The company had planned only 250 this year, and 500 more in 1959. And going into August the firm was still averaging 15 to 20 sales a day.

Hampton Park has paved streets, curbs, sidewalks, street lights and a new sanitary sewage disposal plant.

The split-level, a comparative newcomer to Chicago, is also enjoying sales success. Builder George Arquilla, who opened his first split 18 months ago, has sold 250 of them at \$18,900—90 of them this year. While sales were off in most other Chicago-area developments, the three-bedroom, one-bath split kept Arquilla's sales at a 250-per year rate.

**St. Louis:** Starts for the first half of 1958 were up 68% from 1957—4,481 vs 2,666. And sales now are excellent.

\*The others: Winston-Muss of New York, Hoffman Construction Co of Phoenix, Centex Construction Co of Dallas and Hasbrook Construction Co of Dayton.

Arteaga



**ST LOUIS LEADER: \$8,250 BEST PREFAB**

Most notable success story in the area is that of Realtor-Builder Oliver L Parks. Building National and Best prefabs in Cahokia, Ill, across the river from St Louis, Parks has sold 300 since the first of the year, 204 of them since mid-June.

The Best prefab in St Johns Garden is being sold under 203 (i) for \$8,250. The National model—the low priced Fairlane—is priced at \$11,550 in nearby St Joseph Gardens.

**Wichita:** The remarkably accurate survey of builders plans made by the Wichita HBA indicates starts there will be up 15% in 1958—from 2,563 in 1957 to 3,009.

Wichita builders estimated in January they would start 1,308 houses in the first half. Their reports in July show they actually started 1,367.

The survey covered 218 of the 270 known home builders. Details:

Size builder by units	FIRST HALF		SECOND HALF	
	% of all builders	% of starts	% of all builders	% of starts
0-10	80.9	30.4	73.9	21.2
10-25	13.5	28.2	19.2	36.8
25-100	5.6	41.4	6.9	42

More builders are turning to FHA financing—59.2% of all units vs 14.5% VA and 24.9% conventional. And they will build more low priced homes. Details:

Price Range	FIRST HALF		SECOND HALF	
	No of builders	% of homes	No of builders	% of homes
\$8-10,000	9	3.3	11	5.2
\$10-12,000	25	27.3	27	29.4
\$12-15,000	40	25.9	36	21.9
\$15-20,000	42	23.9	43	27
Over \$20,000	60	19.4	49	16.5

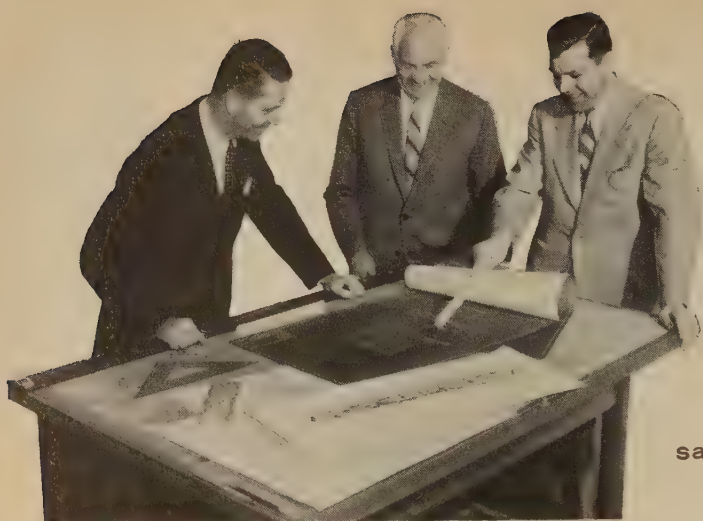
Air conditioning will be included with 553 of the 3,009 homes to be built this year with 68% of the number going into homes priced over \$20,000.

**Miami:** Sales in the under \$15,000 price range have pepped up the Miami-Ft Lauderdale market after a slow start this year. But starts for the first half of 1958, as indicated by building permits, are still off from 10,034 to 8,073.

Janis-Mank Construction Co opened a 625 home tract at the end of June, got signed contracts on 125 within four weeks, selling both FHA and VA for \$13,500 to \$15,300. Green Thistle Construction Co has put up two models and opened a section of 200 FHA Sec 203 (i) homes, selling for \$8,000. With only a directional sign and a small newspaper advertisement Owner Sam Rizzo took deposits on 130 in two weeks. He has tied up 1,000

continued on p 54





Left to right—William H. Pearce, Howard W. Pearce, Peter Braun

“We use TWINDOW  
in all our homes,

says builder WILLIAM H. PEARCE,

Pearce & Pearce Co., Inc., Buffalo, New York



In an interview with Mr. Pearce, whose company built 420 homes during 1957—in the broad range of prices from \$17,000 to \$30,000—he stated that: “We relate the advantages of TWINDOW to our prospects. We tell them that this insulating glass eliminates the cost of storm windows. In fact, the cost of TWINDOW, compared to the cost of storm windows and the trouble and expense of putting them up and taking them down, which so many people must employ a man to do, is actually less. We make this known to our customers, and it definitely adds to the sales appeal of our homes. “All of the 420 homes we built during 1957 contain TWINDOW, and that in itself points up the value of this insulating glass. What’s more,



# Insulating Glass 100% regardless of price range,"



we sell our homes, which include TWINDOW, more easily than homes erected by other builders who do not use insulating glass."

**Here's proof** enough that TWINDOW makes the builder's selling task easier . . . helps him to sell more homes faster. And, as other builders have discovered, Mr. Pearce further states: "TWINDOW units are easier to install . . . safer to handle."

**You are urged** to send for our informative booklet on TWINDOW which is filled with valuable information. Why not write for it right now? Simply address Pittsburgh Plate Glass Company, Room 8272, 632 Fort Duquesne Blvd., Pittsburgh 22, Pennsylvania.

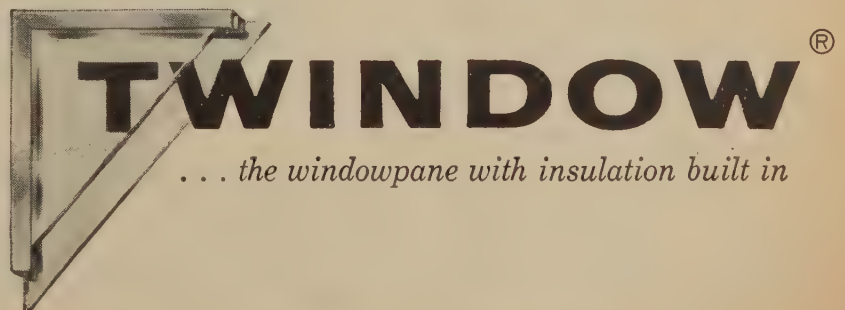
## TWO TYPES OF TWINDOW

### TWINDOW—METAL EDGE

This type is ideal for large windows and where maximum insulation is needed. It's made up of two panes of  $\frac{1}{4}$ " clear-vision Plate Glass, with a  $\frac{1}{2}$ " sealed air space between. Its stainless steel frame, a TWINDOW feature, eliminates bare edges . . . makes handling safe, quick and easy.

### TWINDOW—GLASS EDGE

This type is just the thing for modern window wall construction. Having exceptional insulating properties, it is constructed of two panes of  $\frac{1}{8}$ " PENNVERNON®—the quality window glass—with a  $\frac{3}{16}$ " air space between. TWINDOW—glass edge units are available in popular sizes for a variety of window styles.



SYMBOL OF SERVICE FOR SEVENTY-FIVE YEARS  
PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



## LOCAL MARKETS: \$12,000 row house is Philadelphia's best seller

acres 25 miles north of Miami in Broward county, hopes to build and sell 1,000 203 (i)'s a year until the land is gone.

Builder Red Mock started a 176-home tract in Cutler Ridge, 25 miles south of Miami, in May, has sold 125 of them, all VA no-downs. Prices run from \$12,925 for a three-bedroom, one bath to \$14,800 for a three-two. Price includes range, refrigerator and washing machine.

**Philadelphia:** Row houses and duplexes are pacing a new house sales and starts comeback in the five-county Philadelphia area.

In the first half of the year starts hit 6,600 vs 6,000 in the first half of 1957.

Starts in nearby New Jersey counties were off a little from the rate of first half, 1957, but sales are picking up now. Says Alan



**SOLD: 242 ROW HOUSES IN A MONTH**

Kessler, president of the Home Builders League of South Jersey: "For a while last winter, people were frightened, really frightened by all they heard and read about the recession. A lot of people forfeited down payments rather than go through with buying a house because they were afraid to take on any more obligations. But now we are not only making deals, but holding them. There's optimism now. It makes a big difference."

Philadelphia's acknowledged best seller is a row house built by David C Peace and Ezra B Whitman. In one month following an early summer opening they sold 242 houses, priced from \$11,900 to \$12,350 with FHA minimum down payment financing. The big factor: location. The building site in South Philadelphia is near established neighborhoods. Homes are selling especially well to Italian families who want to stay near their old homes.

Another top seller: a duplex being built by Joseph Cutler & Sons Co in northeast Philadelphia. Cutler sold 50 of the twins in two weeks for \$11,500 each (the price has recently gone up \$200) with FHA financing.

**Memphis:** Builders expect one-family starts this year to reach 5,300. This would make it the best year since 1955 when 7,570 homes were started. There were 4,197 single family starts in 1957, 4,560 in 1956.

At the end of the first half, the local home builders association reported 1,690 homes under construction vs 966 at the same time in 1956; 38% of the 1958 homes were pre-sold, only 20% of the 1957 units.

**Charlotte:** Home building has made a strong recovery. Starts for the first half of the year rose 47% from 1957—1,134 vs 770.

As of July 1 builders had 479 homes under construction, only 182 of them unsold. They planned 455 starts in the succeeding 90 days, had contracts signed on 172.

The \$12,000 to \$15,000 price range is the pace setter. Of those under construction July 1, 178 were in that bracket; 135 were in the

\$15,000 to \$20,000 range and only 61 were in the \$10,000 to \$12,000 bracket.

VA is fueling the present resurgence; of 473 second quarter sales 220 were VAs. FHA accounted for 193; 54 were conventional and six were cash.

Builders believe the end of tight money has helped them more than anything else. Said one: "The thing that really counts is that nobody's talking tight money anymore. That's what scared buyers off."

**Dallas:** Starts for the first half of 1958 have rebounded 20% from first half, 1957—totaled 5,408 vs 4,518. June was the biggest month of the year with 1,011 starts.

An even more optimistic report comes from the Dallas Chamber of Commerce which found residential building contract awards for the first five months of the year up 40% from 1957; from \$41.9 million to \$59 million.

Significantly few Dallas builders have gone back to building on speculation. Most, remembering 1955 when huge overhangs went unsold for a year or more, sell only from models. One exception: Tom Lively's Centex Construction Co which still builds 50 houses at a time, whether sold in advance or not.

**Denver:** With house sales steady but encouraging, builders are now predicting 1958 starts in the metropolitan area will be up 15% from 1957—to 9,400.

One sign of the times: a few builders are edging back into speculative building, after two years of selling from models only. Comments Ed Rice, executive vice president of the local HBA: "Some fellows will gamble when they see the market beginning to absorb all available new homes. Availability means a lot to some buyers. Some don't want to wait eight months to get into a house. And the longer you have to keep them dangling, the more chance there is that they might pull out of the contract."

Best market today: the \$13,000 to \$15,000 bracket, with a big swing to FHA financing.

**Los Angeles:** The nation's biggest home building market had a miserable first half. Starts

on single family homes reached only 18,586, 27% below the 25,464 of 1957. Starts on multi-family units were up 4% from 20,861 to 21,859.

But builders and realtors alike expect a strong comeback in the second half, point to steadily increasing sales in July. And the gingerbread-covered "California Provincial," whose demise has been reported imminent for two years, is still going strong and leading the market.

One of the best sellers: Ross Cortese's \$20,300 provincial model; 1,600 sq ft being sold both FHA and VA. Cortese has sold 300 homes in his big Rossmore development in Orange County since Jan 1, one-third of them his Plymouth model.

Though 100 homes in the big LA market is not a staggering figure in itself, big builders



**PROVINCIAL IS AN LA TOP SELLER**

offer so many models in so many tracts, that 100 of any single house is considered an impressive half-year record.

**New York City:** Starts were up 41% over 1957 in the first six months. The figures:

	1958	1957
Single family .....	1,174	1,452
Multiple .....	11,160	7,315
Total .....	12,334	8,767

The increase was due to the big boom in apartment building which is now 90% of all New York starts (vs 83% last year). And there was a big spurt in public housing: 2,497 units were started this year vs 733 in the same period of 1957.



**1,200 WILL BE BUILT ON FOUR SITES**



**LOCATION OF ALL-STATE'S TRACTS**

### Long Island firm finds location outweighs price

Importance of location in home merchandising is pointed up on Long Island where All State Builders are offering the same home in four scattered sites.

The house carries four different prices; the closer to New York City the higher. Yet the highest priced house with its better location is the best seller. The lowest priced home, the farthest out, is the poorest seller:

LOCATION	MI TO CITY	PRICE	SALES
Hicksville	31	\$14,790	105
Commack	46	\$13,790	85
West Islip	40	\$13,990	5
Captree	50	\$12,990	10

The house itself has three bedrooms, one bath, paneled den, full basement and carport. Models were all opened early in the summer. They are being sold with either FHA or VA financing.

NEWS continued on p 59





*the warmth of natural woods...  
with folding door convenience*

## NEW LOUVER-FOLD DOORS

PATENTS PENDING

*...automatically louver as they open or close*

The sleek solidity of select wood veneer louvers engineered to operate flawlessly in a mechanism of unique design gives Louver-Fold Doors a touch of elegance found in no other door. Functional features gained with Louver-Fold's non-connected louvers make possible striking new applications in residential or commercial use.

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We are: (please check appropriate square)

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Louver-Fold Doors (patent pending) offer all the well-recognized advantages of folding doors *plus* the extra benefits of exclusive "louvered view." Select veneers of rich wood are bonded under heat and pressure into structurally rigid "Air Foil" louvers. These louvers are not connected at the edges, yet close securely to give privacy, sound deadening insulation and superb paneled appearance. When slightly opened, Louver-Fold's 8 $\frac{3}{8}$ " louvers *angle* to allow ventilation, a major advantage where air circulation for heating or air conditioning must be considered.

The exclusive "louver view" operation allows see-through visibility in one direction, blocks it in the other when the door is partially opened. Ideal for use as room dividers, closures, movable louvered screens. Available in either right or left louver view.

Stack space when completely opened is only 1 $\frac{1}{16}$ " per louver — allowing maximum space use.

Installs easily with overhead steel track. No floor track necessary. All hardware of rich, golden anodized aluminum with self-lubricating nylon bushings.



Louver-Fold provides vertical louvered screen between rooms.



Louver-Fold permits light and ventilation, yet gives complete privacy.



Louver-Fold stacks compactly, does not "spring back" from wall.

## NATIONWIDE PUBLICITY

Leading publications across the nation have featured this new approach to folding door design. Thousands of inquiries from prospective home buyers have been processed—an indication of the immediate consumer acceptance of this new door!



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**COLOR**  
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Weiser's two-tone lock colors enable the builder to develop a more distinctive custom appearance through third dimension lock color.

By two-color contrast, Weiser Locks add a new dimension to each door.



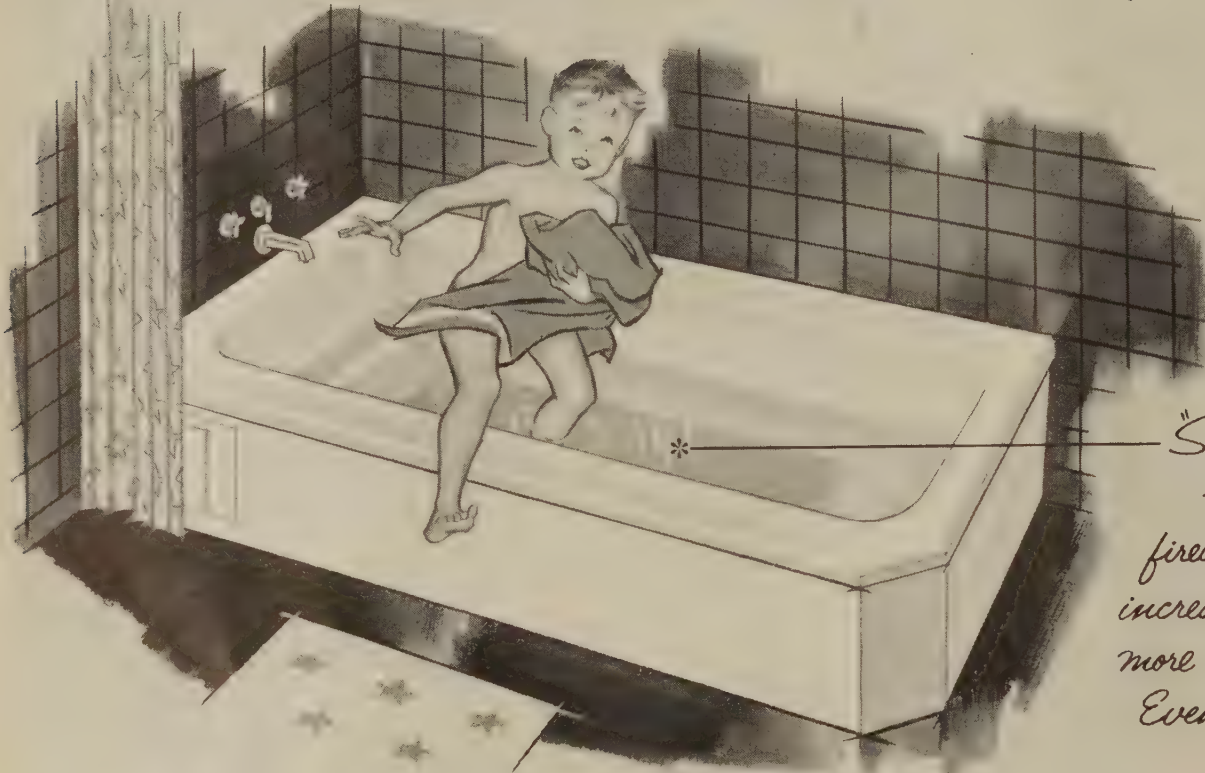
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1. One man can handle, instead of two.

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## MORTGAGE MARKET:

## Money begins to tighten as bond market plunges; Fed fights inflation

Mortgage money is tightening, only eight months after it started easing.

The most compelling reason for the sudden shift in the market is the dramatic plunge of government bond prices. Long term Treasury issues began slipping in April from the year's high mark, then plummeted sharply on a wave of selling in June and July (see graph at right).

On top of this, the Federal Reserve Board has served notice it is through taking steps to ease money. Now, the Fed seems much more concerned with stopping inflation, even if it means tightening money. It approved a hike in the rediscount rate of the San Francisco Federal Reserve Bank from  $1\frac{3}{4}$  to 2%. It also raised the cash margin requirement on the stock market from 50 to 70%.

**New York's sensitive wholesale mortgage market promptly reflected this with a one-point boost in FHA and VA discounts.**

In Houston, T J Bettes, largest US mortgage banking firm, cut its offering price to builders by one point. "Our action is based on our past experience,"

explained Executive Vice President Donald McGregor: "We think our lower price is indicative of what is happening to the market."

McGregor said that while no mortgage investors had yet cut their prices, he had already detected some resistance in the market. One savings bank, which had negotiated for \$3 million in seasoned FHAs out of portfolio, suddenly decided it wanted only \$1 million of them.

Vice President Robert M. Morgan of the Boston Five Cents Bank, agrees "Pressure is on the down side." But he believes some mortgages were overpriced, predicts the market will not soon go below 97 for out of state FHA  $5\frac{1}{4}$ s. "I think we will see a lot of bargaining within today's limits. There will be a lot of selectivity."

### How much will money tighten and how much will it affect home building?

Economist Miles Colean's answer: "Extent of this tightening will not be enough to seriously disrupt FHA operations. But VA will be in trouble."

His point: FHA can stand one or two points on present discounts without hurting builders too badly. But VAs, with their fixed  $4\frac{3}{4}$ % rate, are already being discounted four to six points. Two more points would choke-off the program again except for those VAs being sent to Fanny May at par under its special assistance program No 10 for homes under \$13,500.

**The shift in the market probably means many FHAs for which Fanny May issued commitments will actually be delivered.**

Reason: builders have already paid Fanny May a  $\frac{3}{4}$  point nonrefundable commitment fee. This means they would have to get an open market price of  $99\frac{1}{4}$  to equal the Fanny May net of  $98\frac{1}{2}$ ; an unlikely price in the West and South where Fanny May is used most.

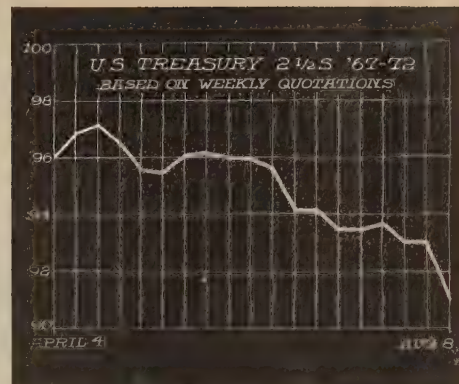
**This summer's turbulence in the bond market has brought the Fed in once to stabilize it—but chances are slim the Fed will move in again.**

With a \$12 billion federal deficit likely, an implicit threat of greater inflation, and with the economy apparently emerging from recession, individual investors have been shifting from bonds to common stocks. Speculators have deserted the bond market in droves.

Yields on long term issues gained  $\frac{1}{4}$  to  $\frac{1}{2}$ % (to  $3\text{--}3\frac{1}{2}$ %) after the drop of  $\frac{3}{4}$  to  $1\frac{1}{4}$ % from October 1957, to April. Concurrently yields on Aaa-rated corporate issues rose from 3.61 to 3.85. Historically mortgages must have a one point yield advantage to compete favorably with corporate bonds. This has now shrunk to  $\frac{2}{3}$ 's of a point.

In this situation the Fed, which had not bought long term Treasuries for six years, came in and bought \$1.09 billion. The Treasury itself bought back \$589.5 million for government retirement and trust fund accounts.

These steps tended to stabilize the market but did not produce a price recovery. As ever, when bond prices sink, mortgage prices soon will follow.



**BIG PLUNGE** of the bond market since April is shown on this chart of prices for the Treasury  $2\frac{1}{2}$ s of 1962-72, a key issue. From the 97.6 high of mid-April (highest price since 1956) it dropped to a low of 91 in early August. In the same time FHA and VA mortgage prices, which normally lag three to four months behind the bond market, edged up an average of 2 to  $2\frac{1}{2}$  points.

## MORTGAGE BRIEFS

### Little price change found

FHA's Aug 1 survey of secondary market prices on  $5\frac{1}{4}$ % Sec 203 mortgages confirms that the market has settled firmly on a plateau.

National average, based on reports from 71 continental insuring offices, is 99.2 vs 99.1 a month earlier and 97.2 last January. (Prices are based on a 25-year amortization with 10% down payment.) Details:

ZONE	OFFERING PRICES, FHA 203s		
	Immediate delivery		
	Aug 1, '58	July 1, '58	July 1, '58
	AVERAGE	RANGE	AVERAGE
Northeast .....	100.3	99-101	100.3
Middle Atlantic..	100	99-101	99.9
Southeast .....	99	98.5-100	98.8
North Central...	99.1	98-100	99.1
Southwest .....	99	97.75-100	98.9
West .....	98.9	97-100	98.8
United States...	99.2	97-101	99.1

### S&L insurance bill dies

A bill forbidding any S&L to advertise deposit insurance unless written by a federal agency has been sidetracked after it appeared headed for quick passage.

Reason: the Senate housing subcommittee, which held hearings on the measure, found the bill would jeopardize successful state S&L insurance plans in Ohio and Massachusetts.

The bill was introduced by Sen J Glenn Beall (R, Md) admittedly because there is virtually no S&L regulation in Maryland. He was upset over ads of the Family Savings and Home Loan Assn of Silver Springs and Baltimore. Family S&L advertises savings accounts insured commercially up to \$10,000 by the American Savings and Loan Indemnity Co. of Panama.

Testifying before the committee, Beall said: "My information at the time was that the insurance was of doubtful validity in that it was not backed by any reliable source of funds to be insurance in the true sense of that term."

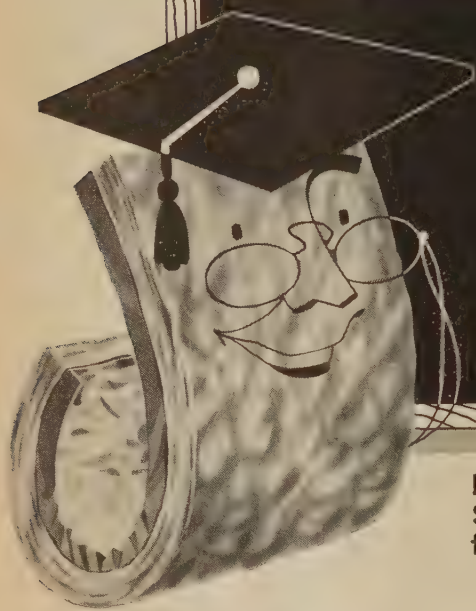
The HLBB estimates there are 1,500 S&Ls not insured by the Federal S&L Insurance Corp, but 230 of these are in the Ohio and Mass-

continued on p 61





# L·O·F Glass Fibers' HOME INSULATION spells out TWO big benefits



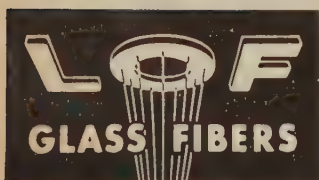
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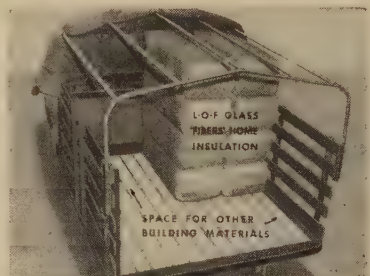


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Easy-to-sell benefit for home buyer. Retains full thickness at edges. Snug fit cuts passage of heat.



achusetts programs. Of the rest only 10 are believed to be commercially insured. Four have their deposits insured by the Tangiers-based International Guaranty & Insurance Co., a firm under investigation in six states (May, News). One of these S&Ls applied to FSLIC for deposit insurance and was investigated by its auditors. Of this audit FSLIC General Manager William H. Husband told the committee: "On two occasions our examiners had to leave because of the records being in such deplorable condition."

### Fanny May funds dwindle

Fanny May's \$1 billion to give an artificial needle to construction of cheap new homes is about gone. The Budget Bureau released \$100 million more on Aug 15, leaving only \$150 million in the President's pocket—enough for about 15,000 houses. The funds are for par purchase of FHA and VA mortgages of \$13,500 or less.

Through Aug 13, Fanny May had committed itself to buy 58,861 mortgages for a face amount of \$706 million. VAs outnumber FHAs three to two.

### Delinquencies up slightly

The nationwide mortgage delinquency rate has risen only 0.17% in a year despite the recession, according to MBA.

Only 2.19% (54,798) of the nation's 2,497,554 outstanding mortgage loans were delinquent. There were 2,446,931 loans at the end of the first half of 1957 with 49,580 delinquencies (2.02%).

Of the 1958 delinquency total, 45% are VA loans, 35% are FHA and 20% are conventional. Details:

DELINQUENCY	VA	FHA	CONVENTIONAL
Three months	0.34%	0.13%	0.16%
Two months	0.42	0.27	0.25
One month	2.06	1.43	0.99

### Amortize only half a loan?

An alternative to a 40-year mortgage as a way to slice monthly carrying charges has been proposed by James E. Bent, president of Hartford Federal S&L.

His suggestion to the Home Loan Bank Board: end the ban on balloon payments so buyers need amortize only part of a loan before

it expires. Bent would allow a 20-year \$10,000 loan with only \$5,000 amortized. The other \$5,000 would remain intact for the full 20 years. Resulting monthly payment would be \$53.83 compared to \$66 for a fully amortized 20-year, \$10,000 loan. If a home owner held the home for the 20 years, the other \$5,000 could be refinanced.

Bent, a past president of the Natl League of Insured Savings Institutions, contends lower monthly payments are needed. But most lenders are reluctant to get them through 40-year mortgages, he notes.

### For faster mortgages

Two of the nation's more progressive lending institutions have adopted the same new method of giving one-day service on mortgage loan requests.

Dime Savings Bank of Brooklyn and the First Federal S&L of Chicago have both equipped field appraisers' autos with telephones, now direct them to a house for which a mortgage commitment has been requested the same day the request is made.

NEWS continued on p 63

## MORTGAGE MARKET QUOTATIONS

(Sale by originating mortgagee, who retains servicing.) As reported to HOUSE & HOME the week ending Aug. 8.

### FHA 5 1/4s (Sec 203) (b)

FNMA prices		Minimum		Down*		Minimum		Down*		10% or more dn	
Spec	Scdry	30-year	Immed	Fut	20-25-year	Immed	Fut	20-25-year	Immed	Fut	20-25-year
Asst	Mkt	30-year	Immed	Fut	20-25-year	Immed	Fut	20-25-year	Immed	Fut	20-25-year
z	xy	Immed	Immed	Fut	Immed	Immed	Fut	Immed	Immed	Fut	Immed
98 1/2	97	98 1/2-99	98 1/2-99	99	99	99-par	99-par	99-par	99-par	99-par	99-par
98 1/2	98	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>	par-101 <sup>e</sup>
—	—	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99	97 1/2-99
98 1/2	97	99-par	99	99-par	99	99-par	99	99-par	99	99-par	99
98 1/2	97	98-par	98-par	99-par	99-par	par	par	par	par	par	par
98 1/2	96 1/2	97 1/2-99	97 1/2-99	98 1/2-99 1/2	98 1/2-99 1/2	99-par <sup>e</sup>	99-par <sup>e</sup>	99-par <sup>e</sup>	99-par <sup>e</sup>	99-par <sup>e</sup>	99-par <sup>e</sup>
98 1/2	96 1/2	98-98 1/2	98	99-99 1/2	99	99 1/2-par	99 1/2	99 1/2-par	99 1/2	99 1/2-par	99 1/2
98 1/2	97	97-98	97-98	98	98	98 1/2-99	98 1/2-99	98 1/2-99	98 1/2-99	98 1/2-99	98 1/2-99
98 1/2	97	98-98 1/2	98-98 1/2	98	98	99-par	99-par	99-par	99-par	99-par	99-par
98 1/2	96 1/2	98	98	98 1/2	98 1/2	99-par	99-par	99-par	99-par	99-par	99-par
98 1/2	97 1/2	par	99 1/2-par	par	99 1/2-par	par	par	par	par	par	par
98 1/2	98	par	par	par	par	par	par	par	par	par	par
98 1/2	96 1/2	98-99	98-99	98 1/2-99	98 1/2-99	99-99 1/2	99-99 1/2	99-99 1/2	99-99 1/2	99-99 1/2	99-99 1/2
98 1/2	97 1/2	par	par	par	par	par	par	par	par	par	par
98 1/2	96 1/2	98-99	98-99	98 1/2-99	98 1/2-99	99-par	99-par	99-par	99-par	99-par	99-par
98 1/2	97	97 1/2-99	97 1/2-99	98	98	99-par	99-par	99-par	99-par	99-par	99-par
98 1/2	97 1/2	99 1/2	99	99 1/2	99	par	99 1/2	par	99 1/2	par	99 1/2

### VA 4 3/4s

City	30 year		25 year		20-25 year		Conven-
	no to 2% down	Immed	5% down	Immed	10% dn or more	Immed	
Atlanta	95 1/2 <sup>b</sup>	95 1/2 <sup>b</sup>	96 <sup>b</sup>	96 <sup>b</sup>	96 <sup>b</sup>	96 <sup>b</sup>	5-5 1/2
Boston local	par-101	par-101	par-101	par-101	par-101	par-101	4 3/4
Boston out-of-st	94 1/2-95	94 1/2-95	94 1/2-95	94 1/2-95	94 1/2-95	94 1/2-95	—
Chicago	95-97	95-97	95-97	95-97	95-97	95-97	5
Cleveland	95-96	95	96	96	96	96	5-5 1/4
Denver	94-95	94-95	95-96	95-96	95-96	95-96	5 1/4-5 1/2
Detroit	95 1/2	95 1/2 <sup>b</sup>	96-96 1/2	96-96 1/2 <sup>b</sup>	96-96 1/2	96-96 1/2 <sup>b</sup>	5 1/4-5 1/2
Houston†	93 1/2-94	93 1/2-94	93 1/2-94	93 1/2-94	94	94	5 1/4-5 3/4
Jacksonville	95	95	96	96	96	96	5 1/4-5 1/2
Los Angeles	94 1/2-95	94 1/2-95	96	96	96	96	5 1/2-6
Newark	98	97 1/2	98 1/2-99	98	99	98 1/2	5-5 1/4
New York	98-98 1/2 <sup>d</sup>	98-98 1/2 <sup>d</sup>	98-98 1/2 <sup>d</sup>	98-98 1/2 <sup>d</sup>	98-98 1/2 <sup>d</sup>	98-98 1/2 <sup>d</sup>	5 1/4
Okla City	95-96 <sup>b</sup>	95-96 <sup>b</sup>	95-96 <sup>b</sup>	95-96 <sup>b</sup>	96	96	5 1/4-5 1/2
Philadelphia	96-97	96-97	96-97	96-97	97	97	5-5 1/4
San Fran	95-95 1/2	95-95 1/2	95 1/2	95 1/2	96	96	5 1/4-5 1/2
St Louis	93-96	93-96	94	94	94-97 <sup>b</sup>	94-97 <sup>b</sup>	5-5 1/2
Wash, DC	95 1/2-96 1/2	95-96 1/2	96-97 1/2	96-97 1/2	96-97 1/2	96-97 1/2	5 1/4-5 1/2

\* 3% down of first \$13,500; 15% of next \$2,500; 30% of balance.

Footnotes: a—no activity, b—very limited market, c—very limited par market, d—quotations cover construction loans also, e—on FHA 4 3/4% mortgages, x—FNMA pays 1/2 point more for loans with 10% down or more, y—FNMA net price after 1/2 point purchase and marketing fee, plus 2% stock purchase figured at sale for 50¢ on the \$1, z—price after 3/4 point purchasing and marketing fee, plus 3/4 point commitment fee; applies only to FHA and VA mortgages of \$13,500 or less, †—denotes week ending Aug 22.

Immediate covers loans for delivery up to 3 months; future covers loans for delivery in 3 to 12 months.

Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones.

Quotations refer to houses of typical average local quality with respect to design, location and construction.

SOURCES: Atlanta, Robert Tharpe, pres, Tharpe & Brooks Inc; Boston, Robert M. Morgan, vice pres, Boston Five Cents Savings Bank; Chicago, Maurice A. Pollak, exec vice pres, Draper & Kramer Inc; Cleveland, Jay F. Zook, pres, Jay F. Zook Inc; Denver, A. C. Bradley, asst vice pres, Mortgage Investments Co; Detroit, Harold Finney, exec vice pres, Citizens Mortgage Corp; Houston, Donald McGregor, exec vice pres, T. J. Bettes Co; Jacksonville, George Dickerson, Stockton, Whatley, Davin & Co; Los Angeles, David Northridge, vice pres, The Colwell Co; Newark, William F. Haas, vice pres, Franklin Capital Corp; New York, John Halperin, pres, J. Halperin & Co; Oklahoma City, B. B. Bass, pres, American Mortgage & Investment Co; Philadelphia, W. A. Clarke Sr., pres, W. A. Clarke Mortgage Co; St. Louis, W. C. Rainford, pres, Mercantile Mortgage Co; San Francisco, M. V. O'Hearn, vice pres, Bankers Mortgage Co of Calif; Washington, DC, George W. DeFranceaux, pres, Frederick W. Berens Inc.

### NEW YORK WHOLESALE MORTGAGE MARKET

#### FHA 5 1/4s

Immediates: 97-99  
Futures: 97-99

#### VA 4 3/4s

Immediates: 94 1/2-95 1/2  
Futures: 94 1/2-95 1/2

#### VA and FHA 4 1/2s

Immediates: 93-94  
Futures: no activity

Prices for out-of-state loans, as reported the week ending Aug 15 by Thomas P. Coogan, president, Housing Securities Inc.

Note: prices are net to originating mortgage broker (not necessarily net to builder) and usually include concessions made by servicing agencies.

### FNMA STOCK

	Aug 13	July 9	Month's low	Month's high
Bid .....	57 1/2	59 1/4	56 3/4	59 1/4
Asked .....	59 1/4	61 1/4	58 3/4	61 1/4

Quotations supplied by C. F. Childs & Co



**how to give  
people what  
they want!**

## **NOW... Modernfold adds doors of wood to the fabulous line of fabric doors!**

The MODERNFOLD story is full of surprises! If it described only the research-proved superiority of MODERNFOLD construction, this alone would be an unbeatable sales-point.

And now, MODERNFOLD offers a greater selection of folding doors than anyone in the industry, by introducing doors of choice *wood*...in selected, matched veneers, laminated to a solid core.

MODERNFOLD's famous fabric-covered doors give you a wonderful choice of weaves and patterns...all washable. The powerful double-strength steel inner frame is the essence of long-lasting service and shape-retaining good looks.

Whatever people want, MODERNFOLD has: custom doors, stock doors, economy doors, and the new WOOD doors.

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Your MODERNFOLD Distributor is listed under "Doors" in the yellow pages.



THE FIRST AND FINEST IN FOLDING DOORS!

**NEW CASTLE PRODUCTS, INC.,** New Castle, Indiana  
Manufacturers of  
Folding Doors, Air Doors, Shower Enclosures,  
Vinyl-coated Fabrics, and Peabody School Furniture.  
In Canada: New Castle Products, Ltd., Montreal 23.



## LABOR:

## Anti-featherbed controls accepted by unions in four midwest cities

Some significant gains in the fight against featherbedding have been registered in the spring-summer negotiations of 1958.

The advances are few—but what makes them particularly important is that they affect labor in some of the most notorious make-work areas in the US.

When the ten anti-featherbed commandments of the AFL-CIO Building Trades Dept were announced last January (March, News), building industry leaders generally felt the pronouncement was a publicity gimmick, would take years to filter down to the local level, if ever.

Instead they are finding evidence of genuine concern among some labor leaders about the time-honored union concept of more pay for less work. Comments President Ralph R Marks of the Chicago Roofing Contractors Assn: "Just to get unions to discuss contracts with anti-featherbed clauses is better than we have ever done before." Says Contractor Carl Lomax of Granite City, Ill: "Most unions agree we've got to watch our costs to get jobs." Some signs of progress:

- In Cleveland, after a seven-week strike, unions agreed to a six-point cost cutting program. It calls for: 1) a full day's work for a day's pay; 2) no featherbedding or restrictions on use of tools; 3) no coffee breaks; 4) no show-up time for bad weather; 5) no restrictions on amount of work in any period; 6) payment by check (if employer so desires). Contractors had asked three other restrictions which were dropped: exemption of foremen from collective bargaining; elimination of non-working stewards; abolishment of travel time. "Adoption of these points should bring an increase in productivity and a reduction in non-essential costs without working hardship on anyone," says Vice President William J Hunt-in of the Building Trades Employers Assn.

One surprising aspect of the Cleveland agreements: they were signed only a few weeks after unions declined to even discuss featherbedding with builders (May, News).

- Granite City, Ill, the "East Side" of St Louis, Mo, was the first area to adopt the AFL-CIO "ten commandments" in toto. The way had been paved when the local AGC chapter started to discuss an anti-featherbed program with unions last October. "When the building trades announced their 'ten commandments' last February we were very happy and scrapped our draft code," says Contractor Lomax. Special separate anti-featherbed contracts have been signed with 12 of the 19 trades.

- In St Louis, unions would not sign a "ten commandment" pact but agreed to set up a committee with contractors to discuss ways to improve efficiency. "An informal day's-work-for-a-day's-pay pact has been agreed already, and is being lived up to," says Henry Till, local manager of AGC.

Anti-featherbed pacts in St Louis area will not affect home builders immediately because they negotiate separately and contracts are not due for renewal till next year. But builders are cheerful about the change of labor's attitude.

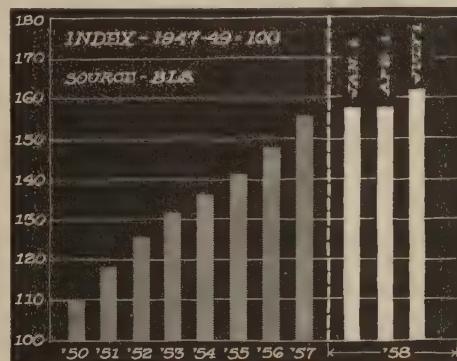
- Chicago plasterers and lathers signed a "new agreement to assist better employee-employer relations." It provides: 1) no restrictions on production or on labor-saving devices; 2) adequate apprentice training; 3) no strikes or lockouts; 4) no unnecessary em-

ployees; 5) only a "reasonable profit" by contractors; 6) a full day's work for a day's pay—with no bonuses or unreasonable travel time; 7) no special conditions of employment. "I'm not interested in our guys getting something for nothing," says President Irvin D Friedman of the Lathers' Local.

- Roofers in Chicago struck rather than forego four featherbedding work rules in the contract. But they went back to work and agreed to keep discussions open, if necessary accept arbitration on whether to keep the rules. They require: 1) two men on any job; 2) pay for travel time; 3) one alleged redundant worker to stay on the ground; 4) a limit on hoist weights.

## Mechanized plastering approved by Chicago unions

New lathing and plastering methods are helping meet drywall competition. Large sheets of lath up to 4'x12' are power stapled to studs. Plaster is sprayed on in two coats, finished with a power trowel. The technique, approved by Chicago unions which recently signed anti-featherbed pacts (story col 1), cuts plastering time in half, saves up to 25% on costs.



HOURLY WAGE SCALES of union building trades rose four points to 162 on the BLS index in the quarter ending July 1. Average increase in all trades was 9.1¢ during the quarter, 13.9¢ (4.4%) over July 1, '57. Biggest increases in the past year were scored by electricians (17.4¢), plumbers (17¢), carpenters (15.2¢).

## LABOR BRIEFS

### Paint roller restrictions gain

Painters have won the right to impose contract restrictions on use of spray guns and rollers in California. But in doing so they may have opened the door to a competitive union.

The union's right to specify work conditions, challenged by local painting contractors, was upheld by San Bernardino superior court. Ruled Judge Martin Coughlin: "If an employee is entitled to bargain collectively concerning with whom he shall work, he certainly has the right to bargain in like manner with respect to the kind of service he shall render for the price agreed." And he called it a "lawful labor practice" to protect job security "in a society where there has not been an adjustment of wages" to savings from use of new techniques, whose benefits "the workman is entitled to share."

But the judge also rapped the union for insisting on "pick and shovel" methods when more advanced equipment is available.

The union had attempted unsuccessfully to have the case transferred to a federal court so its outcome would affect the whole country. It was turned down because of lack of federal jurisdiction.

One immediate effect of the court ruling: several contractors signed contracts minus tool restrictions with United Construction Workers.

UCW, an offshoot of John L Lewis's United Mine Workers catchall District 50, is attempting a "quiet and systematic" movement into California building labor. Its only other foothold there: a contract signed with Fresno home builders after a six-month strike last December (Jan, News). It has organized home building spottily in other states, likes to move in where established AFL locals are having trouble. All trades are in one local, which sets wage rates like an industrial plant union (by job classification instead of by trade). In San Bernardino UCW signed many AFL men. "With 300 out of work, they'll take any job," says Painting Contractor George Smith.

Conflict between the two unions could mean trouble for home builders if AFL men refuse to work beside UCW. Painting Contractor Frank A Calhoun, who uses UCW painters, was signed off by a general contractor when the job was picketed by AFL trades.

### More help from NLRB

Builders can expect more help from the Natl Labor Relations Board to resolve labor problems.

NLRB now has jurisdiction over any builder who buys more than \$50,000 of materials a year which are shipped across a state line. This means more protection under the Taft-Hartley Act from secondary boycotts. Too, it makes possible civil damage suits in unfair labor practice cases. They are not possible under many state laws.

Until now NLRB has only handled cases involving much bigger firms, which left most builders in a jurisdictional no-man's land between federal and state labor laws.

NEWS continued on p 65





**"You can't beat a PEASE HOME for sure, substantial profit"**



"We've been building Pease Homes since 1946, because they always sell fast. The market may vary over the years, or from one location to another, but we can easily customize to meet the current demands, thanks to Pease flexibility," says Ed J. Schroeder & Sons, Toledo, Ohio.

Master builder Ed Schroeder, NAHB Director and President of the Toledo Home Builders Association, is proof in action that you can offer more value at lower cost with Pease Homes!

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## PEASE HOMES

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HAMILTON, OHIO



## MATERIALS & PRICES:

# Costs begin to climb as surge in starts opens gate to inflation

The galloping ghost of inflation has returned to haunt home building.

A new price spiral has already begun behind the spurt in starts. Key material prices have started up—dramatically. Two out of three construction workers signed pacts with wage increases. "And there is every indication that costs will continue to rise," says President Alexander Paulsen of Long Island Home Builders Institute.

"We've got a built-in inflation that will last a couple of years," says Col E H Boeckh, Washington cost analyst.

"American families are more concerned about rising prices than anything else," warns US S&L League President Joseph Holzka. "If this concern . . . is transformed into a buyer's rebellion, then the recovery from the recession may prove to be very short lived indeed."

The meaning to builders: watch your costs closer than ever.

The trend shows in key lumber prices. They are at their highest level in two years, and "are getting stronger almost by the minute," says one Oregon wholesaler.

Std & btr green fir studs sold for around \$67M at Northwest mills in mid August (vs \$62 a year ago). They had jumped \$10 in a month. And orders climbed 40% above production through July, reports West Coast Lumbermen's Assn. Fir plywood sheathing, another key home building material, is fetching a steady \$110-112M (5/8" CD). Sanded plywood (3/4" AD) rose another \$4 to \$76M in August, at a time when plywood prices usually start to drop.

### Profits have dwindled

More upward pressure may come from distributors and dealers who complain their profits have dwindled to the lowest level since the depression of the 30s (an impossibly low 2% of net sales, according to a 1954 survey for US Gypsum by Management Consultants Cresap, McCormick and Paget). Many dealers who shaved profits finer and finer in an effort to keep business last year now realize there is only one way to go—up—if they are to escape bankruptcy. "Prices have got so low there just isn't anything left to give," says Lumber Dealer Paul DeVille of Canton, O.

There are warnings in first half reports from manufacturers, many of whom openly admit they want to hike prices to improve profits (see p 67). "Our market surveys in-

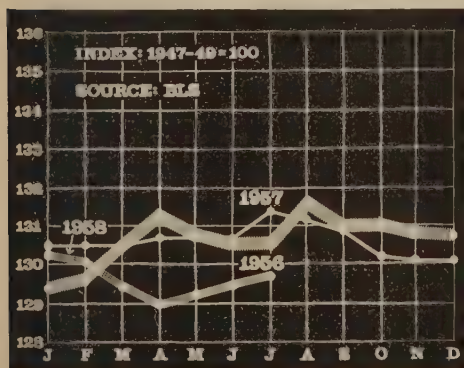
dicate a strong demand for the balance of the year, which should result in improved prices," says Board Chairman I J Harvey Jr of Flintkote. Manufacturers say they need price increases because raw materials and labor have both gone up. They will probably be bolder about boosting prices because of the lead set by steel makers.

### Steel makers raise prices

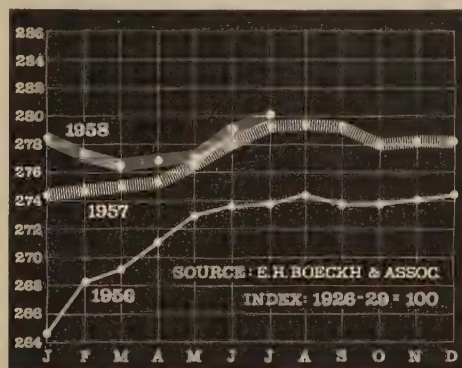
Steel, bellwether material of the whole economy, rose about \$4.50 a ton last month. The increase followed what seemed little more than a token month's delay after the July 1 wage boost. It was a calculated risk in a year when steel production has limped along at around 50% capacity for many weeks. The Mid-East crisis and prospects of a new arms race may have had something to do with it. More likely it was the familiar inflationary spiral which never really stopped. "Any increases in steel and labor cannot be absorbed in present profits," explained an International Harvester spokesman blandly as his company, along with most other steel users, prepared to pass on the increase.

### Labor costs up too

Builders' labor costs are up too. Most 1958 agreements call for increases. Wage rates in July averaged 4.4% higher than a year ago. And about half this year's pacts run two or three years—with built-in increases for the future.



**MATERIALS PRICES** rose again in July—they have been climbing slowly since April. BLS's July index was 129.7—up 0.2 points from June. Increase in lumber and wood products (from 116.4 to 116.8) was mainly responsible.



**RESIDENTIAL BUILDING COSTS** went up another 0.9 points to 280.1 in July. "You're still getting some labor increases and there was quite a strengthening in the price of lumber," says Col E H Boeckh.

## MATERIALS BRIEFS

### Low cost house barriers

NAHB is looking for new ways to crack what it considers the two main barriers to cheaper housing—unrealistic and conflicting local regulations, and a shortage of land with roads, sidewalks and utilities already in place.

A special committee under Miami Builder Perry E Willits, also chairman of NAHB's technical division, has been studying the problem since last spring, will report to NAHB directors at their San Antonio meeting next month that:

1. A comparative appraisal of a basic low cost house has been made by all local FHA and VA offices. The study, directed by FHA's head office, will be the first to really uncover local differences in costs and requirements—and what causes them. Appraisers were asked to mark up plans, note features not acceptable to FHA or local codes. FHA already admits the study will show up wrong interpretations of MPRs.

2. A New York City meeting was held late last month with lenders and legal experts to discuss wider use of land leases. Says Willits: "There are big areas in almost any city you could name which could be developed for low cost homes this way. Many are part of a large estate and cannot be sold because of some legal angle." Leaseholding could lower monthly payments slightly, but its main use would be to open up parcels which might otherwise not be available for home building.

### More gas air conditioning

Shipments of year-round gas air conditioners for homes in the first six months jumped a whopping 163% over the same period last year (3,436 units vs 1,305). Gas men say the increase was due to stepped up promotion, improved design and substantial price cuts. They hope to sell a total of 7,000 units this year ('57 total: 2,467).

### AIA product service

AIA says it has "convincing demonstration" that its proposed building products registry (April, News) will go ahead. Nearly 1,200 architects have pledged \$30,000 in subscriptions to the service which would supply technical reports on product use, including "privileged communications" on failures.

AIA now will ask manufacturers to help finance the service at \$25 per product line. It hopes to sign up more architects as "more ammunition to throw into the selling job to manufacturers."

### Cement supply adequate

Expansion now underway by cement mills should end the recurring cement shortages that have plagued builders in the post World War 2 boom.

By the end of this year, cement makers will have boosted capacity 25% above 1955 levels, to a theoretical 390 million bbl per year. By 1960 they expect to operate at around 90% capacity—considered ideal—instead of the 100% level they had to maintain through 1955-6. *NEWS continued on p 67*



## HELPING BUILDERS

# Sell Garages

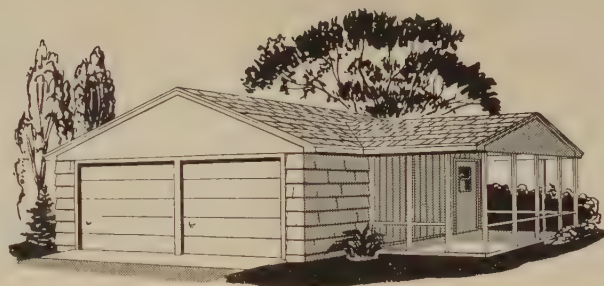
## FOR EXTRA PROFITS

● Now is the time that builders welcome sparkling new ideas with which to stimulate garage and carport business.

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Builders enjoy selling these garages because they are practical, offer good choice of modern styling, and can be built quickly and economically.

Your Weyerhaeuser 4-Square Lumber Dealer will gladly make these plans available to you. He also can furnish Weyerhaeuser 4-Square Kiln-dried Lumber for framing and finishing. These garage designs will help you promote sales and increase your profits.



DESIGN NO. 2518

These designs emphasize the variety of designs you can show your prospects. Some garages have breezeways. All have extra space for storage.

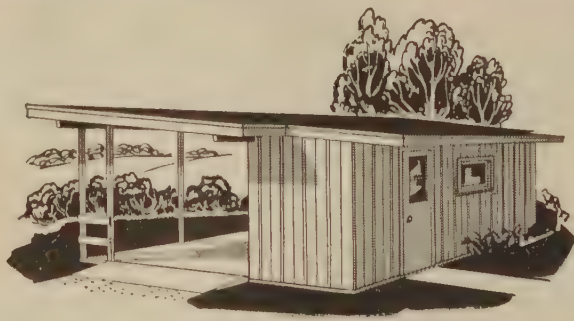


DESIGN NO. 2520

# Weyerhaeuser

# 4-SQUARE®

## LUMBER AND BUILDING PRODUCTS



DESIGN NO. 2523

Here you see two more of the 25 attractive garage and carport designs offered by Weyerhaeuser. In the stylings, one and two-car designs are featured.



DESIGN NO. 2515



# 25 Modern

## GARAGES AND CARPORTS

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**BLUEPRINTS AND MATERIALS LISTS** are available for each garage design through your Weyerhaeuser Dealer. You save the time-consuming design work and material figuring that go into most garage jobs.

**FULL LINE OF BUILDING MATERIALS:** Your Weyerhaeuser Dealer offers a full line of dependable Weyerhaeuser 4-Square Kiln-dried Lumber products. He will be glad to help you with *all* your building needs.

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## Producers forget past year's gloom as housing spurt stops earnings slide

The 1957 slump in building materials sales and profits, which worsened in the first quarter of this year (April & May, News), has begun to level off. And producers are optimistic the housing upsurge will mean a better second half.

The improvement showed in some second quarter reports. Although business was off from last year, the lag was generally not so bad as in the first quarter. Several companies said their position would have been worse but for careful controls, like Libby-Owens-Ford's "vigorous efforts to adjust overhead expenses to current conditions."

First half earnings figures from 38 companies show 29% improved both sales and profits over 1957; 44.7% upped sales; and 39.5% had bigger profits. In a similar survey at the end of the first quarter only 9.5% of companies improved both sales and profits; 28.6% upped sales; and 14.3% had bigger profits.

"Sales and earnings showed some improvement in the second quarter largely because of an increase in home equipment sales. The modest upward trend is encouraging," says President Joseph A. Grazier of American Standard.

Firms for which housing is the main market were particularly sensitive to the upturn in starts. National Gypsum operated at only 60% capacity in the first quarter, stepped it up to 70% by June. Explains an Owens-Corning-Fiberglas spokesman: "There seems no question that with 1 to 1.1 million starts there is insufficient business for manufacturing plants to be prosperous. With 1.3 million all plants are busy." (Starts have topped 1.3 million only twice—in 1950 and 1955.)

Increased orders and plant activity are bringing out cheerful second half forecasts. Yale & Towne's lock and hardware division reports "new orders at the highest level in many months." Nutone says "We have called

back all employees laid off plus additional hirings." And Owens-Corning-Fiberglas reports "Residential building materials plants are busy round the clock."

"I am hopeful that this higher rate . . . can be sustained," sums up Board Chairman Adrain R. Fisher of Johns-Manville. US Plywood looks for a "decided upturn" in 1959.

### HOW THEY FARED

First half sales and earnings of some of the biggest producers, comparing this year with last:

COMPANY	SALES	% CHANGE	
		IN SALES	IN NET
<i>Lumber</i>			
US Plywood ..	\$203,242,100	.7	22.7a
Weyerhaeuser ..	195,562,202	-7.3	-20
Georgia Pacific	71,990,058	-2.1	-5.4
<i>Wallboard, Roofing, Tile</i>			
Celotex .....	28,419,247	-7.7	-76b
Masonite .....	43,465,865	2.4	-13.2c
Ruberoid .....	36,400,418	-2.2	-35.7
US Gypsum ..	122,585,485	1.7	-7.8
Johns Manville	138,271,000	-6.6	-7.1
National Gypsum	67,862,900	-3	-12.5
Flintkote .....	53,869,895	-3.9	-47.4
Armstrong Cork	118,864,374	-4.4	-4.4
Cong Nairn ...	22,208,737	-18.5	d
Certain-Teed ..	39,410,308	1.6	-70.3
Philip Carey ..	30,226,997	-6.5	-55.8
<i>Heating &amp; Plumbing</i>			
Amer Std ....	163,571,234	-10.7	-22.1
Crane .....	159,279,000	-25.2	-61.3
<i>Cement</i>			
Lehigh Portland	32,755,212	-3.4	-31.2
Ideal .....	38,366,777	12	3.2
Penn Dixie ...	19,631,481	12.9	42.4
Lone Star ....	43,755,701	-5.4	-26.5
<i>Miscellaneous</i>			
Amer H'ware ..	19,770,000	27.6	67
Yale & Towne	58,600,532	-10.9	-24.2

Footnotes: a—yr ending 4/30/58; b—6 months to 4/30/58; c—9 months to 5/31/58; d—loss of \$1,397,087.



DAVIS HOUSE WILL HAVE ALUMINUM WALL AND ROOF PANELS

## Retired Alcoa founder plans three aluminum houses

Arthur Vining Davis, 91-year-old founder and ex-chairman of the board of the Aluminum Co of America, has decided to build three experimental aluminum houses of his own.

Davis, though still a big Alcoa stockholder, now holds no office in the company he headed for 29 years. For the past 10 years he has been living in Miami, investing millions of dollars in Florida land and business.

Unlike the Alcoa Carefree House of last year, which was basically a post and beam frame structure, the Davis houses will be nearly all aluminum. Walls and roof will be composed of 4' sandwich panels made by Pan-

elfab Products Inc of Miami, one of the firms in which Davis has bought an interest. Panelfab Engineering Consultant Charles Payne has designed an interlocking joint for the sandwich panel for quick installation and strength.

Work on the first house, designed by Giller, Payne & Waxman of Miami, is scheduled to begin this fall. Its estimated construction cost will be high—about \$45,000 including air conditioning and a screened-in swimming pool. But Davis and his designers hope to prove that smaller aluminum houses, mass produced, are both practical and economically feasible.

NEWS continued on p 71

## CODES:

### New Jersey gets a state residential code

New Jersey has just issued a building code manual for housing. And "nearly 80% of the state's municipalities say they want to use it" reports John S. Wright, executive vice president of the state home builders assn.

The new "rules for construction of one- and two-family dwellings" supplement an existing general building code, should be specially useful to smaller towns which have neither the need for a commercial building code nor the technical staff to administer it.

"This has taken us almost ten years of heartbreaking work," says Builder Richard S. Hudson of Montclair, NJ, who was builder representative on the code committee. The code is a performance type, and the manual lists materials and techniques that comply with it. Examples: plywood sheathing (5/16" over 24" o.c. studs for walls, 3/8" for roofs) and drywall are allowed.

In 1950 Code Campaigner Hudson urged: "The building codes situation in the state is intolerable. Regardless of the merits of any individual code there are too many of them." He added: "I am building the same house at Montclair for at least 5% less than it is costing in Livingston. Unnecessary requirements are simply waste, and our present codes are full of waste." Hudson urged a mandatory code, but did not get it. There was too strong a home rule sentiment.

Municipalities have been urged to adopt the code by the state department of conservation which is responsible for it. Said Code Coordinator A. R. Post in a notice to municipal clerks in the state: "The very simplicity of adopting the code by reference ordinance will result in the saving of thousands of dollars. There are many advantages . . . The real value will depend on its reception and use by public officials and private industry."

### Plastic pipe approved

Plastic pipe for street-to-house water lines has been approved by the Cleveland building code. It is the first large city to do so. "As much as 75% less time may be involved in laying and connecting a service line than with metal tubing," says Sales Manager J. W. Owings of Republic Steel's pipe division. (Republic makes plastic as well as steel pipe.)

### ASA home building code

ASA will hold a meeting Sept 9 of more than 100 interested groups to decide whether to go ahead with the job of coordinating the residential construction requirements of the three existing model codes\* into one ASA standard, as proposed at a House & Home Round Table (H&H, June & July). If there is a consensus in favor of the idea ASA will go ahead and develop its standard, which the model codes could then incorporate intact, as they do other American Standards.

Meantime Consulting Engineer Arnold Kronstadt was hired by NAHB to make a comparative study of the three model codes. He confirmed what the Round Table said: there is no important difference in their construction requirements for one- and two-family houses.

\* Building Officials Conference of America, International Conference of Building Officials, Southern Building Code Congress.



# Here's how to install a **TRUSCON** Hollow Metal Door and Frame in just 15 minutes...

That's right! Complete the job in just 15 minutes. No special tools, just use a common carpenter's hammer and a screwdriver.

With Truscon Series 50 and Series 57 Steel Doors, there's no cutting, fitting, planing, sanding. Simply assemble frame; plumb it in the opening; nail anchor tabs to studs; set door in place; drop in hinge pins; and install lockset. You get a good-looking installation that fits—that can't swell or warp. Bonderized and prime coat finish permits on-the-job one-coat painting to match room decor.

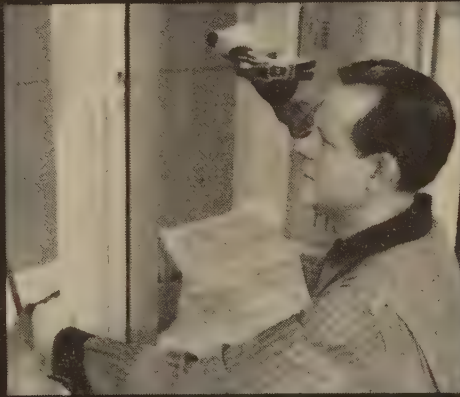
Series 50 Steel Doors: 1 $\frac{3}{8}$ " thick, are designed for use in homes and smaller buildings. Series 57: 1 $\frac{3}{4}$ " thick, is an all-purpose exterior, interior steel door. Call your dealer and get immediate shipment out of Truscon's warehouse stocks.

## 7 FAST STEPS DO THE JOB

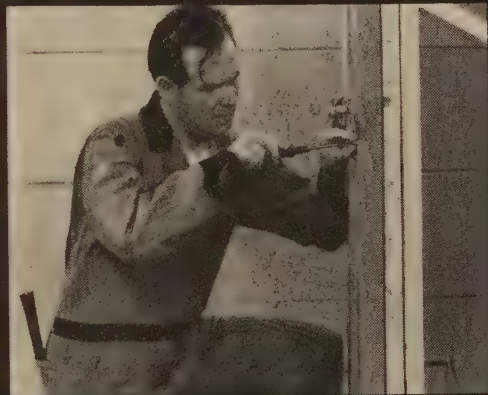
**1. ASSEMBLE FRAME.** Slip two jambs into header. Bend and clinch two tenons at each corner.



**2. SET FRAME IN PLACE.** Set frame in opening, plumb. Bend over stud anchors.



**3. NAIL TO STUD.** Nail bottom anchors first. Then, the rest. Recheck for trueness.



**4. SET DOOR IN PLACE.** First, apply hinge leaves (no mortise to take time). Then, set door in frame.



**5. INSERT HINGE PINS.** Simply drop pins in leaves, tap down.



**6. INSTALL LATCH AND STRIKE.** Simply screw to prepared holes. No mortising.



**7. INSTALL LOCKSET.** No barrel hole to bore. No tedious measuring. You're done!



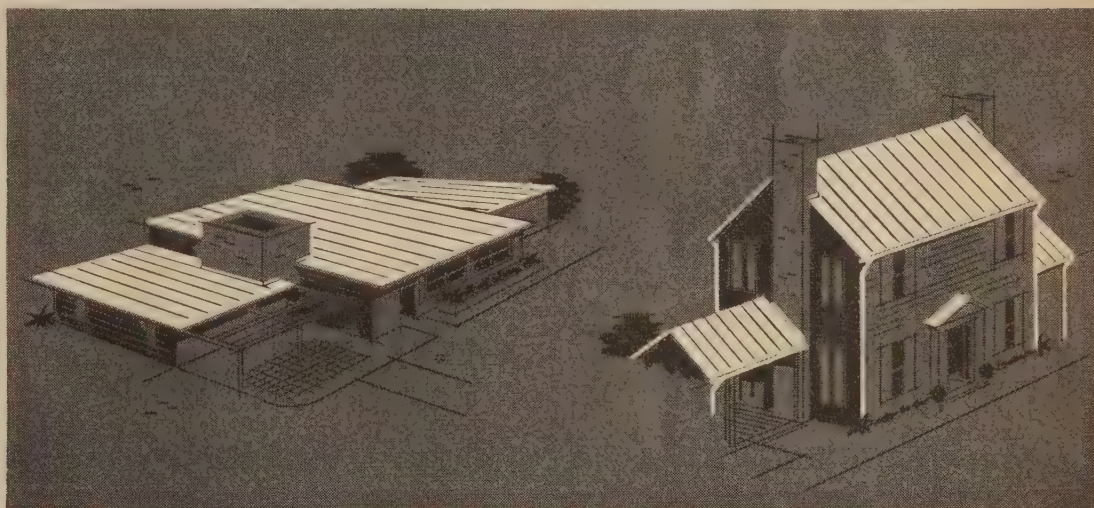
**BEAUTIFUL AND WONDERFUL REPUBLIC STEEL KITCHENS.** Stock cabinets fully fabricated in a wide range of sizes, colors, and styles, make modular planning and installation easy. Republic's stock oven and range cabinets will accommodate brands of built-ins homeowners prefer. Full line of accessories give even the minimum kitchen that "custom look". Get the complete story from your Republic Steel Kitchens Distributor, or write today.



**HANG REPUBLIC HOUSE-LONG "K" GUTTERS** and cut installation time in half. New Republic 26 and 28 gage Galvanized Steel Gutters now are made as long as 32 feet. Hang them in one piece. Cut installation time. Ideal for long-roofed contemporaries. No need to measure, cut, and solder as with "old style" short gutters. No seams to detract from appearance, or to become potential points of failure. Sold through Republic Sheet Metal Distributors. Send for data.



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Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



## REMODELING:

# Home Improvement Council forced to take recession-caused budget cut

Home Improvement Council has pulled in its horns and "learned to live with" a budget one quarter the size of what it hoped for.

"But," says Executive Director Don Moore, "we're very optimistic."

HIC was set up a year ago to replace Operation Home Improvement as a national fixup promotion organization on a permanent basis. In the fall it laid down an ambitious \$2 million program (Nov, News). "We down-rated that to \$1 million almost immediately," says Moore. "We got kicked in the teeth by the recession and had to exercise considerable conservative management and finally realized we should have about \$500,000 to work with."

Main things to go were: 1) \$750,000 for advertising (HIC has done no paid advertising), 2) \$150,000 for market research, 3) \$100,000 to train in technical know-how on fixup. Other promotional and administrative spending was chopped in half.

But HIC still has managed to do this much:

- Sign up 2,520 local members—mostly lumber dealers but including some fixup contractors too. HIC missed its original 10,000-member target by a long way, but Moore blames lack of seed money for a proper recruiting drive.

- Charter 12 local chapters, with several more in the works.

- Give local members five kits of display and promotion material.

- Pull 81,000 entries in a \$125,000 contest in which home owners told in 25 words what their No. 1 fixup project was. A second contest, begun July 1, will give \$50,000 in prizes for actual fixup jobs. Both were designed primarily to boost public interest in fixup, and

build traffic through local members' stores, only source of entry blanks.

- Promote, jointly with *Living for Young Homemakers* magazine, an HIC demonstration remodeling house in 15 cities.

Building materials producers still carry the big HIC load. As national members, 114 of them put up 85% of the budget (local members dues just about cover actual cost of point-of-sale material they receive).

Moore outspokenly decries "the apathy among the other hundreds who should be participating." But he doesn't expect many more national members to sign up. "We have to be realistic, we might even have a smaller budget next year," he admits.

• • •

Shady sales methods, bane of the fixup industry, have been slapped down in two recent cases:

- Holland Furnace Co was ordered by the Federal Trade Commission to stop alleged deception and scare tactics. Examiner James A Purcell charged Holland salesmen posed as government or utility inspectors, dismantled furnaces and refused to re-assemble them on the false grounds they were unsafe. Holland claimed the order was based on insufficient evidence and "unavoidable incidents experienced in every service industry."

- Five Detroit salesmen who got chimney repair jobs by persuading home owners rats were gnawing away the mortar (April, News) received sentences up to two years in jail. They staged fake inspections in which a supposedly mortar-eating white rat was pulled from the chimney, offered to fix the damage and remove the rats.

## NON-WHITE HOUSING:

# Pioneer builder of interracial housing starts organization to help integration

A national organization has just been formed to lend risk capital to builders of racially integrated housing developments.

Modern Community Developers, a New Jersey corporation, says it will lend up to one-third of the risk capital builders need to put up interracial projects. President Morris Milgram, himself a pioneer developer of integrated single-family tracts (H&H, Apr '55), says the group already has \$193,000 in subscriptions, with \$30,000 paid-in stock capital. It will begin lending when \$250,000 is subscribed.



MILGRAM

The organization is shooting for \$1.5 million capital through the sale of common stock (it got its SEC clearance Aug 5). Milgram expects an average project to require between \$25,000 and \$50,000 seed money.

The development group, with offices at 84 Nassau St, Princeton (where Milgram is building his third racially integrated project), will demand security like land, mortgages or stock for its loans. "We also will require that builders have community support for their projects, and are building with sound architectural plans," Milgram says. Community Developers will also sell advice on sales and planning of integrated projects for a share of project profits before taxes. Advance word of the organization's formation has stirred interest by builders in Boston, Chicago, Grand Rapids, St Louis and Yellow Springs, Ohio, says Milgram.

Among other officers of the company is Frank Montero, vice pres, former associate executive director of the Natl Urban League. Directors include David Scull, co-chairman of the Baltimore Friends Social Order Committee and a director of Nationwide Insurance Co; Morton Grossman, Quincy, Mass building materials dealer; Albert Sprague Coolidge, Cambridge, Mass physicist; former baseball player Jackie Robinson.

## CANADA:

# Home building record likely as starts soar

Home building appears headed for its biggest year ever.

Government forecasters now expect 150,000 starts and a \$1.8 billion outlay in 1958. Previous best year: 1955 (with 138,276 starts). They upped an earlier forecast (Apr, News) 8% as starts soared (180,000 annual level at one point) during the first half.

The upsurge was sparked by: 1) the recession-countering program under which government money was made available for low cost homes through approved lender agents (12,557 units in the first six months) and 2) greatly stepped up NHA lending by private investors. First half figures:

LENDER	UNITS	% CHANGE FROM '57
Insurance Cos .....	8,333	+ 31
Banks .....	12,338	+121
Trust & Loans .....	2,103	+712

But lenders and builders are already worrying whether sales will keep up with starts. Says Vice President A H Lemmon of Canada Life Assurance Co: "The large volume coming to market . . . gives rise to doubts . . . in some localities. [Loan] companies are following a cautious approach." Montreal Builder John Caron, chairman of the Canadian Construction Assn's housing committee, warns: "There is not sufficient buying power."

## Court denies builder's design copyright claim

A builder who successfully protected the copyright of his house design in 1957 was beaten when he tried to collect damages from another alleged plagiarist.

Last year Builder Lorne Hay of Sarnia, Ont sued Builder John Kukura for allegedly copying the design of Hay's split level house. Hay had copyrighted the design in 1956, had built about 35 models himself. He won the suit and was awarded \$650 damages.

Other homes similar to Hay's were also being built in Sarnia and other Ontario cities. Some builders paid a \$60 fee for the plan. But others, Hay decided, were plagiarizing. He filed several suits, including one against Builder A R Charge of Sarnia for \$3,000.

NHBA became concerned at Hay's apparent enthusiasm for legal protection and asked for an explanation. Hay quit the association. NHBA promptly offered to pay Charge's legal costs (\$5,000 to \$15,000).

Charge's defense centered on two points: 1) his house and Hay's were both variations of a basic split level design. CMHC staff Architect Raymond Card testified that CMHC regulations leave "really very narrow limits within which to vary." 2) Hay's houses were remarkably like one shown in the Windsor, Ont parade of homes the year before Hay copyrighted his design. Hay had visited the Windsor house and shown interest in it.

Charge won his case. Said Justice J M King of the Ontario supreme court: "I cannot help feeling that there is an element of poetic justice in the outcome. If, for example, Callicott [builder of the Windsor house] had brought an action against the plaintiff. . . what more could he have done than ask the Court to believe he had developed the plans out of his own mind."



## PEOPLE: Builder Researcher Bill Scheick leaves BRAB/BRI to join Timber Engineering Co

**William H Scheick**, one of the best known men in building research, is quitting as executive director of Building Research Advisory Board and Building Research Institute to become research boss of Timber Engineering Co, research and engineering offshoot of the Natl Lumber Manufacturers Assn.

The switch, effective Sept 15, probably means a new emphasis on housing in Teco research which covers a wide range of lumber applications.

Scheick is not going to Teco with any set program to work on, but says he hopes to interest lumber producers in technical developments for home building. One important aspect: use of lumber in combination with other materials. Lumbermen have long worried about their declining share of the home building market in favor of competitive materials, so they should welcome anything research can turn up to bolster the use of wood. A probable early project will be to take over development work for the Lumber Dealers Research Council which got bogged down at the University of Illinois Small Homes Council.

SHC, best known and most productive research center for home building in the US, was set up by Scheick in 1944 when he was professor of architecture at the University of Illinois. He ran it till 1949 when he left to become executive director of BRAB, a division of the Natl Academy of Sciences.

In 1951 he organized the Building Research Institute as a complementary and supporting organization to BRAB with industry backing. He built its membership from 37 supporting groups the first year to 350 now (with 950 individual members).

BRAB works for government departments, is currently doing technical studies for FHA on: 1) warm air heating duct insulation, 2) new materials for sewer lines, 3) slab-on-grade construction, 4) plastic pipe, 5) double casing of wells, 6) soils.

BRI is best known for its technical conferences where industry experts discuss trends and developments. Upcoming examples: flooring (Sept 17-18), paints & coatings (Dec 3-4), acoustics (Jan 14-15). One of its latest and most ambitious projects: an 18-man committee to coordinate housing research, chaired by **Leonard Haeger**. The committee has started a survey of current and recently completed research projects, and is working out a way to report work done by obscure experimental stations, much of which dies in dusty reports without builders ever hearing of it.

Scheick will replace **Carl A Rishell** who is retiring after 22 years at Teco. His successor at BRAB/BRI was still to be named.

### Senate housing subcommittee loses its staff director

**Jack Carter**, for the last three years staff director of the Senate housing subcommittee, has resigned to become vice president of an Alabama home building firm.

As head of the eight-member staff that helps the Senate group draft the nation's housing

laws, Carter won a reputation for impartial dealing with contending pressure groups. But Capitol Hill observers say his influence with Senators never reached the heights achieved by **Joseph P McMurray**, who served in the same role as staff director of the parent Senate banking committee for 10 years before him. McMurray, an avowed partisan for public housing, has been New York State housing commissioner since 1955.

Carter, 40, was an aide to former Sen Herbert Lehman (D, NY) before joining the subcommittee. With the Lee Development & Construction Co of Jackson (which also builds in Mobile and Birmingham), Carter hopes to demonstrate what can be done to rehouse displaced from renewal under FHA Sec 221 (July, News). "I've been on the receiving end of so many kicks about how it doesn't work, I'd like to help show that it can," says he.

Builder **Bill Atkinson**, 1951 president of NAHB, suffered a surprise defeat in the Democratic gubernatorial runoff in Oklahoma. He was badly beaten (363,742 votes to 158,780—largest margin ever in the governor's race there) by **J Howard Edmondson**, 32, a political dark horse who campaigned on a pledge to submit prohibition repeal to a people's referendum a month after he takes office. Atkinson had been favored by dopesters up to the July 1 primary. But Edmondson topped him in a field of 12 candidates, 108,358 to 107,616.

FHA has signed up two newcomers to housing as district directors in California.

**Daniel G Minto**, former car salesman and Republican campaign organizer, was named director of the Northern California office in San Francisco. He succeeded **James C Belda** who resigned after three years as director to enter private business.

**E P "Ned" Green**, farmer and one-time secretary-manager of the California state fair, was named director of the Sacramento office.

He succeeds **Roy H Pinkerton** (often touted as "the best director in the US" by Sacramento builders). Pinkerton was promoted to deputy zone operations commissioner in Washington.

**HONORED:** **Herb Studer**, FHA director in Kansas City, with an outstanding service award—"the highest recognition in government for performance far exceeding normal standards" (first FHA director so honored); **Edward J Dee**, FHA director in Fort Worth, Tex, with a sustained superior performance award "for his overall administration."

**PREFABBERS:** **George H Frederking** was named vice president and general manager of W G Best Homes Co of Effingham, Ill; **William H Sims** was promoted to vice president and general manager of Wilson Homes Inc of St Louis, Mo; **Carl Hubertz**, ousted manager of National Homes' Horseheads, NY plant, joined General Homes of Fort Wayne, Ind as production manager; **Roger Prescher** was named chief architectural designer for Great Lakes Homes of Sheboygan Falls, Wisc in its enlarged engineering department.

**DIED:** Builder **August Rahlves**, 41, of brain cancer at his home in Berkeley July 20. He had been ill for a year.

Rahlves, a graduate engineer, was president of Rahlves & Rahlves Inc, had built about 850 homes in the \$15,000 to \$20,000 price range, mostly in Sonoma and Alameda Counties, since 1945. He was president of the Greater East Bay Home Builders Assn in 1950-51, was an NAHB regional vice president from 1953 through 1957 and a member of the NAHB executive committee in 1957.

Rahlves was one of 10 US builders who visited the Soviet Union in 1955 to inspect housing there.

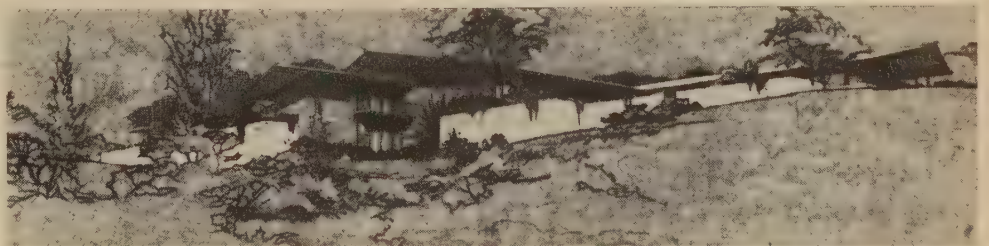
His younger brother and partner, **Louis Rahlves**, 38, is now running the firm.



SCHEICK



GUS RAHLVES



### Utah picks non-Bauhaus governor's mansion

Utah has resolved its controversy over the design of a new mansion for the governor.

The approved design is a rambling ranch house quite unlike the Bauhaus-type contemporary that started the whole dispute.

A year ago, Architect Georgius Cannon designed a flat-roofed, glass and masonry home which was approved by Gov George D Clyde but rejected by a majority of a committee of other state officials. Their chief complaint: the flat roof. (Aug '57 News).

Cannon was told to try again. His second design, also contemporary but not Bauhaus,

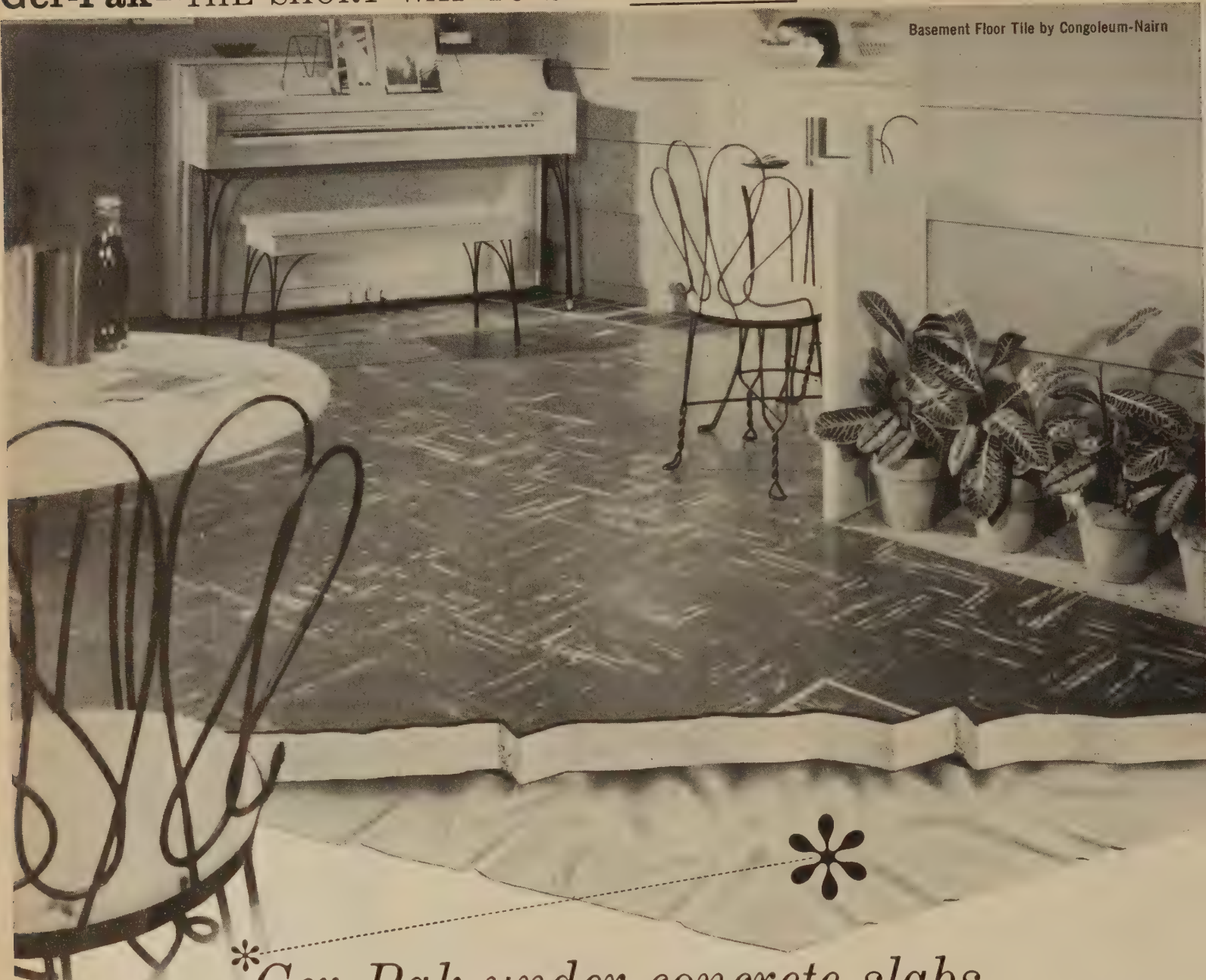
was accepted. But bids were taken twice and rejected both times because total cost would have been more than the \$200,000 appropriated. A dismayed Cannon said he could compromise no further. He was paid off (about \$7,000) and Architect William F Thomas was commissioned to do the job.

Thomas' design (above) was quickly accepted, particularly after he assured the committee that the house can be built for \$114,000. If the bids approximate the estimate, work will begin this month with completion in 10 months.



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# Industry cheers for the Code Round Table program

HHFA has had a continuing interest in encouraging code modernizations since 1946. In recent months this interest has accelerated.

We will watch with interest the outcome of the American Standards Assn's conference in September. We have not yet fully determined what is the most productive approach to achieve the end in view.

ALBERT M COLE, administrator  
Housing and Home Finance Agency

Would appreciate six more copies of the building code reprint.

A H BAUM, building commissioner  
St Louis

I have just finished reading and rereading the Round Table on codes.

I am always ready to quibble with you on details, but in this instance let me compliment you on a splendid approach to a complicated problem.

If reprints of this report are available, I would like copies to send to the members of the National Electrical Code Correlating Committee.

H H WATSON, commercial engineer  
Construction Materials Division, GE,  
Bridgeport

The Round Table on obsolete building codes was certainly the most important Round Table ever held on behalf of the building industry.

While I thoroughly agree with the report and realize that it will be of tremendous value in helping some communities emerge from the Dark Ages, the move has to come first from the builders, the persons most affected by bad codes. Until each builder assumes a crusading and progressive spirit, we cannot intelligently condemn codes, manufacturers and/or materials.

CLAYTON H POWELL, president  
Powell Homes, Inc, Savannah

I have just read the Round Table on building codes and I think it is terrific.

The six-point program should be undertaken as promptly as possible.

Salt Lake County is currently studying several building codes for adoption. Our association has recommended the adoption of the Uniform Code of the International Conference of Building Officials.

GORDON H DICK, executive secretary,  
Utah HBA

HOUSE & HOME has wisely injected itself into the vital need of a uniform construction code.

In New York State there are at least 3 cities, 609 towns and 219 villages with a total population of more than 1,250,000 without any codes at all. And Secretary Hatfield, of the Michigan Building Officials Conference, says "There are numerous municipalities in Michigan which do not have Codes, even though our state has an enabling act whereby they can adopt any recognized code."

JOSEPH PLATZKER  
building consultant  
New York City

Just what we need, right now. We have just succeeded in getting a Code Committee appointed by the Mayor and hope to make speed.

JAMES TODD BALDWIN, AIA  
Lancaster, Pa.

HOUSE & HOME is to be congratulated on its efforts on the code front. A coordinated program for local and national action would be most welcome in Boston.

CHARLES R BRAGG, managing director  
Greater Boston HBA

Thanks for the inspiration that naturally comes to the building industry for your initiative in this field.

ERNEST G FRITSCH, chairman,  
NAHB code committee

This meeting was decidedly worthwhile and I was very glad to participate.

NORMAN E SCHMIDT, director of building  
Evanston, Ill.

... a constructive contribution to a very much needed improvement in building codes.

CLARENCE C LANG, executive secretary  
Metropolitan Real Estate Board  
St Louis

This was a "major breakthrough" and you deserve a medal for bringing it off!

M F GIGLIOTTI, manager  
Structural Plastics Engineering  
Monsanto Chemical Co

Your discussion and publicity will result in great benefit, not only to the building industry, but to the general public.

S L McCONNELL, chief,  
Division of Regulatory Inspections  
New Orleans

Keep up the splendid work.

GEORGE A FRANK, executive vice president  
Westchester (NY) HBA

I would like to request 20 copies of the Round Table on building codes.

RAYMON HARRELL, executive vice president,  
Lumber Dealers Research Council

I would like extra copies of this reprint if you can spare them.

GEORGE VAN LEEUWEN, AIA,  
Norfolk, Va.

Congratulations!

We are having the same problem here in Tucson, so we need 12 copies of the Round Table Report.

SAM O WITT, president  
Tucson HBA

I have read with great interest your "Building Code—enforced Waste."

We in northern Nevada are about to embark on a program of building code revision and compilation and find your article an indispensable guide in our activities.

In order to awaken our membership to the up-coming program, would you please forward to us at your earliest convenience 60 reprints of the above-mentioned article?

BOB ROBERTSON, executive secretary,  
Northern Nevada HBA

We intend to quote from your Round Table on restrictive codes in a forthcoming issue of our magazine. If you will send me a few reprints I shall be more than glad to deliver them by hand to the most important people in the area who are concerned with the code question.

JAMES W PEARSON, executive vice president,  
Metropolitan Washington HBA

As a director of NAHB for the past ten years I know of the pressing need for enlightened code requirements. Your magazine is doing an outstanding and needed service through "Round Table Discussions."

A D COLE  
Hingham, Mass.

Please send 1000 reprints.

I H YACKNESS, executive vice president  
Builders Assn of Metropolitan Detroit

It appears to me that the industry must do a public relations job in connection with the local press to bring the "code facts" to public notice. The local associations must also aim press releases to the buyer's point of view, showing that this cost comes out of the buyer's pocket.

When the politician realizes that he is being blamed for the higher cost to the buyer or owner, action will result. At the present time most local officials have no knowledge of codes.

LAWRENCE W NELSON,  
executive vice president,  
Minneapolis HBA

Our members are heartily in accord with what you are trying to do. At last we have the kind of backing and thinking to accomplish something. If you have any suggestions for "grass roots" support that we can give now, let us have it.

GEORGE R PERKINS, executive vice president  
Birmingham HBA

Will you kindly furnish us with 25 reprints? We plan to distribute them to our code committee and directors.

ROBERT P FLATH, executive vice president  
Columbus HBA

We are gratified at the progress that HOUSE & HOME is making in connection with a program that we hope will result in a standardized home building code.

S P PARISI, executive secretary  
Metropolitan Pittsburgh HBA

Would it be possible to obtain or purchase approximately 200 reprints for distribution to my Board and city officials?

EDWARD R DIXON, executive vice president  
Albuquerque Board of Realtors

We would appreciate receiving 6 copies of your Round Table.

EILEEN R CARSON  
National Research Council  
Ottawa, Canada

Am very much interested in exploring the possibility of holding a one-day session here on "Building Codes—Enforced Waste."

IRVING H BRINTON, executive secretary  
Delaware HBA

letters continued on p 74



## Home building in Alaska

In its August issue (p 46) HOUSE & HOME reported on Alaska's challenge to the US housing industry. This report was based, in part, on dozens of letters from H&H subscribers in Alaska. Many more letters—all in response to an invitation from the editors—were received after the August issue went to press. Published now on this page, these letters tell a first-hand story of home building in Alaska—its problems and its opportunities.—ED.

### Home building as seen by a banker

The biggest problem has been the lack of sufficient capital to finance groups of houses. It would help if we had a ready market to buy the mortgages we handle as a servicing agency.

This has been difficult since almost all of the insurance companies and mortgage houses have thought of Alaska as an icy wilderness in which no real housing could possibly exist. In fact, one eastern insurance company quipped "We prefer not to have mortgages on frozen assets." Only one insurance company has sent a man up here to look over the Territory and with true vision of what the future held, recommended approval to purchase a block of FHA guaranteed mortgages each year. Though this amount has been relatively small, it has been regular and we have been able to depend on it.

The higher cost of living and the high cost of shipping materials to Alaska has caused the average FHA guaranteed mortgage we have processed to be approximately \$22,000. The majority of homes built recently have been of a larger size since the families have been staying here longer and are larger. The mortgages on those homes have ranged between \$27,000 and \$30,000.

The chief problem of all of the builders is the great delay in getting delivery of materials to Alaska. Many eastern suppliers have treated Alaska as a foreign country and shipped through their foreign department with much additional red tape and delay—all of which increased the cost to the local builder. Now that we are a state, we have already received evidence from some suppliers that we are not a foreign unit set out somewhere on the other side of the world but are truly accessible with regular trucking over the Alcan highway and regular shipments from Seattle and Portland.

R G LAUBE, assistant vice-president  
FHA Department, manager  
National Bank of Alaska  
Anchorage

### Better homes are now possible

I have, just this year, gone into building homes for sale on a full time basis. I intend to build about three homes this year in the \$35,000 bracket. The housing market at this time is quite active, and I feel that it will continue.

In the past two or three years an increasing number of people have demanded a more livable and permanent type home, and now with Statehood, I feel that many of the present problems will be alleviated, making it easier for the builder to give people more of what they desire in a home.

E D SPRINGER  
Anchorage

### "This is a do-something country"

We are distributors of plumbing, heating and building supplies. Our business is about 30% ahead of last year. . . .

This is a do-something, fix-up new country, where practically every one is trying to get a better home. Many undertake building the entire house alone, doing all the labor themselves.

We try to help them along by furnishing all the pre-fab material we can. Anything that cuts the cost of labor is a natural, because wages are so high.

R A DAVENNY  
Fairbanks

### "FHA office is very efficient"

Sales for this firm should be good again this year. We hit \$2,000,000 in sales in 1957. . . . The Anchorage population jumped 50% from 1950 to 1955, and we expect Statehood to even make a larger increase.

The FHA office here is very efficient. Commitments come through in a few days and go up to \$30,000. Under a special assistance program, FNMA buys all single family FHA loans at no discount.

SEWELL F FAULKNER  
Jack H White Co  
Real Estate & Insurance  
Anchorage

### Substandard homes to be replaced

There is a big job to be done in replacing and improving our many substandard houses. Furthermore, the probable increase in population indicates increasing residential construction activity.

We anticipate a healthier economic climate under Statehood and residential financing will undoubtedly share the many benefits which will accrue.

G H THOMSON, assistant cashier  
Alaska National Bank of Fairbanks

### Young people like Alaska

The real change will come in the very wide interest of young people in Alaska as a place to live. We expect that younger people will be flooding into our cities, and hope that we can keep up with the demand for work and housing.

EDWIN B CRITTENDEN, AIA  
Anchorage

### Statehood will raise standards

The one great benefit that will eventually evolve because of statehood, is that a better control of construction outside of incorporated areas will mean better housing in general for the residents, and will greatly facilitate our work.

H W GRINDLE  
Chief Architect FHA  
Anchorage

### Building in the "banana belt"

We lie in what is commonly referred to as the "banana belt of Alaska." The summer temperatures range in the seventy's, and the long sunny days have a full eighteen hours of daylight at this particular time of the year. . . .

The housing picture looks very favorable. The 1953 surplus of low priced dwellings has been absorbed, and existing construction is again demanding premium prices. Since the Statehood announcement, I am planning a new subdivision with complete development, including \$25,000 to \$35,000 homes in an area next to the new Alaska Methodist College. The ground was broken for this institution only last month.

Speculative land purchases have increased tremendously this year, and acreage prices in the outlying areas of the city are rising accordingly. The oil activity on the Kenai Peninsula thirty miles to the southwest is more responsible for the impetus in the real estate market than is the Statehood announcement.

CARL T RENTSCHLER  
C T Rentschler Agency  
Anchorage

### Statehood spurs new home starts

I am one of the smaller contractors in Anchorage and my volume of business is minor compared to many. . . .

I have just contracted to build a home for a business man who now feels safe to proceed with confidence that Statehood will tend to stabilize our economy and improve business generally.

My chief business problems are: 1) an inadequate local stock of better building products required to build good homes, 2) higher shipping costs, 3) time lost in expediting of materials during short building season, 4) finance problem at reasonable rates for residence purchasers.

HARVARD S MALMSTEN, building contractor  
Anchorage

### Many trailer homes are being used

The housing shortage in Sitka is very acute as we are going through a boom period with the construction of a \$55,000,000 pulp mill. Apartments rent from \$55 to \$190 per month. Houses are at a premium, selling upwards to \$26,000. This is a lot of money for a home, as people working here cannot afford it.

There is not as much home building going on as one would expect in a boom town; this is due to so many trailer homes coming in. Some are for rent, others are for sale on a monthly payment plan.

CLARENCE R RANDS  
Sitka

letters continued on p 80





## Wood-Mosaic BLOCK FLOORS give *Trouble-Free Performance*



Wood-Mosaic Block Floors were used throughout the attractive, new Elise Apartment building in Washington, D. C.

This beautiful floor is prefinished at the factory with our newly developed "Diamond Lustre" finish, making it scuff-proof, water-proof and stain resistant. Abrasive tests prove wearing qualities to be 3 to 4 times greater than ordinary "on-the-job applied finishes." Maintenance is reduced to a minimum. Made of Appalachian Oak and precision milled to 9" x 9" with tongue and

groove for perfect fit. Wood-Mosaic Block is bonded under enormous pressure that exceeds normal architectural specifications. Its 3-ply construction eliminates installation headaches and assures lifetime wear.

It is quickly and easily laid with adhesive over suspended concrete, concrete slabs-on-grade or wood subfloors. Ease of installation means important time saving on each job.



### Wood-Mosaic

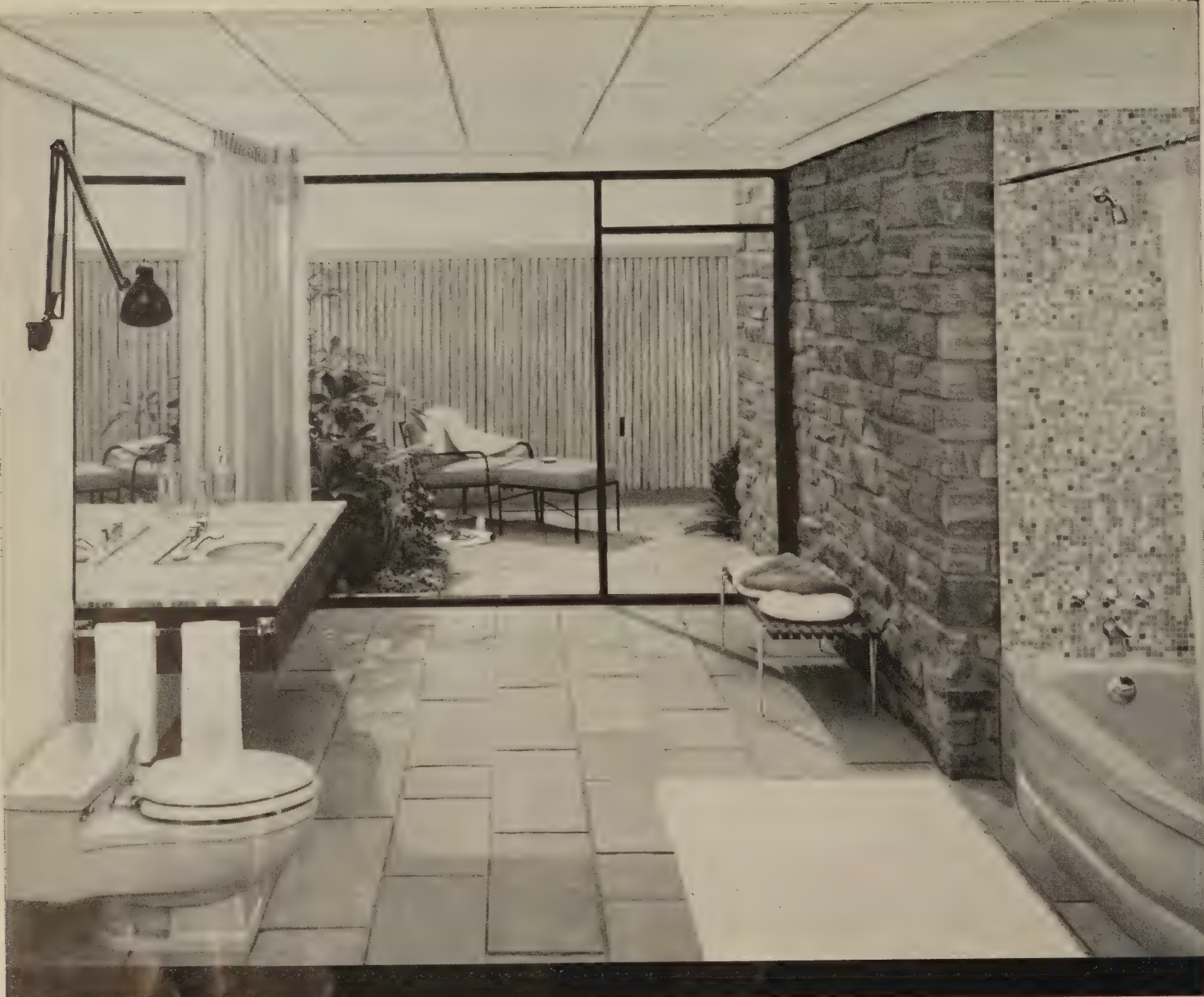
LOUISVILLE 9, KENTUCKY

WOOD-MOSAIC CORPORATION OF CANADA LTD.

WOODSTOCK, ONTARIO

*Maker of the World's Finest Hardwood Floors Since 1883*





**NEW!** This vitreous china lavatory with revolutionary new fitting arrangement, featuring spray spout, may be built in vanity or installed on cabinet or legs.

## Briggs ideas that help sell more homes

*A unique bathroom featuring the ultramodern, wide-shelf Chaucer lavatory*

Simplicity that spells personal luxury . . . contemporary textures that delight . . . accented by the compatible color of handsome Briggs Beautyware in such harmonizing tones as Coral, Autumn Yellow, Sea Green, Sky Blue, Pearl Gray and Sandstone. Here's a bathroom filled with translatable ideas for your homes, including the enviable luxury of Briggs new, wide-shelf lavatory—more resting space than ever for cosmetics, shaving equipment. For striking bathrooms that will make your homes "stand out" against competition, build with Briggs Beautyware—America's smartest plumbing fixtures.

BRIGGS MANUFACTURING COMPANY • WARREN, MICH.

# BRIGGS

B E A U T Y W A R E





*Cushiontone on underside of balcony (foreground) and between beams of ceiling adds beauty and quiet. Picture it in your model house.*

## This amazing new Armstrong Ceiling soaks up noise and gives your homes today's smart new look



**MAKES ANY ROOM COMFORTABLY QUIET.** The tiny openings in the attractive textured surface of Armstrong Cushiontone absorb up to 75% of the noise that strikes it. Cushiontone is easy to install — goes up fast.

**H**OW MANY of your prospects are satisfied with plaster ceilings? A mere 7 per cent, says a consumer survey. The discerning 93 per cent prefer modern, noise-quieting ceilings and their added decorative appeal.

No wonder more and more builders are putting up Textured Cushiontone ceilings. For Cushiontone adds a look of luxury, and its rich, three-dimensional surface absorbs up to 75% of the noise that strikes it.

Wherever your prospects look, on network

TV and in magazines, they're being *pre-sold* on the extra value of an Armstrong ceiling.

Plan to use Armstrong Textured Cushiontone in your model house. Skilled designers at the Armstrong Bureau of Interior Decoration will show you, without charge, how to color-harmonize rooms with the ceilings.

For more information about Armstrong ceilings and the free decorating service, write to Armstrong Cork Company, 3909 Sixth Street, Lancaster, Pennsylvania.

# Armstrong BUILDING MATERIALS

TEMLOK ROOF DECK

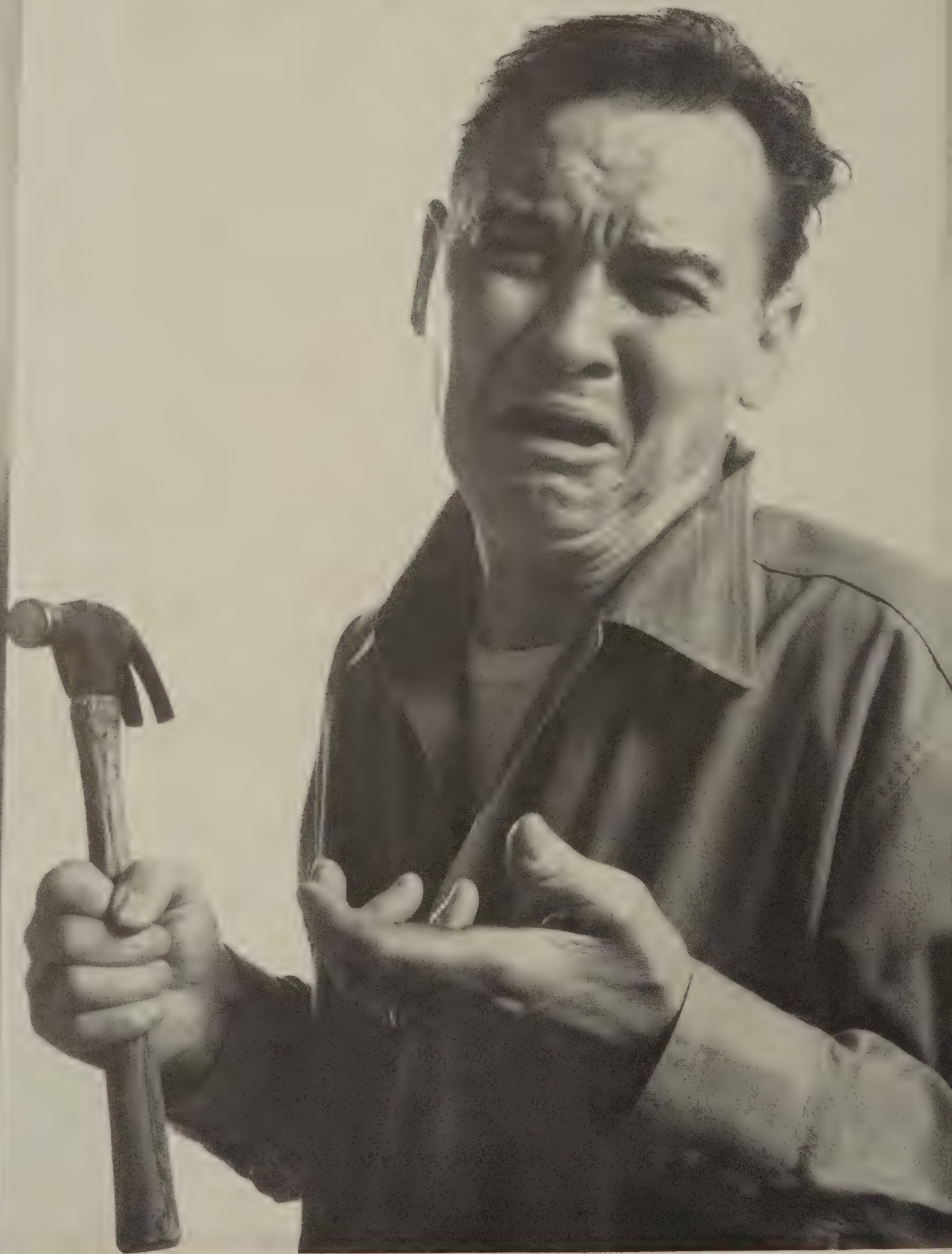
TEMLOK SHEATHING

TEMLOK TILE

CUSHIONTONE CEILINGS



Won't somebody please





*tell the boss about*

# KENNATRACK

## ALL-STEEL POCKET FRAMES

### ***They install easy and fast—with low unit cost!***

One man can assemble the entire unit with only 4 screws. And, smart builders know, the real cost of anything in a house is the installed cost. Easier, faster pocket door installations, plus low unit cost of all-steel, warp-proof Kennaframes, mean lower installed cost... lower building costs!

*It's patented*—this all-steel frame eliminates warping and binding problems and enables one man to install a pocket door in minutes! The entire assembly consists of only two steel split-jamb members and a header with removable track and hangers installed. Simple horizontal and vertical adjustment features assure easy alignment, perfect plumb and fit every time! Smooth performance guaranteed for a *housetime*—with Kennatrack!

*Now! 3 price ranges  
—for any budget!  
(Each one loaded  
with Kennatrack  
quality features)*



#### **Scottie® 1000**

All-steel frame at practically wood frame prices.

#### **Custom 900**

The standard of quality throughout the industry.

#### **Custom 800**

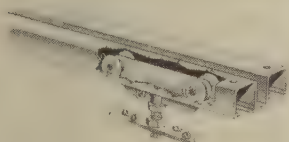
The ultimate in pocket door frames.

Door sizes: 2'0" x 6'8" to 3'0" x 6'8"



***Send for free catalog***

Write today for your 32-page catalog—or see Sweet's Light Construction File 6a/Ke.



BY-PASSING DOOR HARDWARE. 3 price ranges. Choose from 11 series of top-quality, easy-to-install hardware.



FOLDING DOOR HARDWARE. 2 price ranges. Easy-to-install hangers support doors up to 100 pounds.

*For quiet and for quality*

# KENNATRACK®

SOUND-CONDITIONED GLIDING DOOR HARDWARE

Kennatrack Corporation, Elkhart, Indiana  
A subsidiary of Ekco Products Company

©1958



## Hillside houses

Your June story on hillside houses was very interesting. At the rate things are building up around San Francisco, it won't be long before everything will have to be on a 45° slope.

JOHN LORD KING, AIA  
San Francisco

Your article will lend a great deal of strength to our efforts to sell home builders on better handling of difficult hillside lots. The opening paragraph making the principle applicable only for houses costing \$20,000 or more is out of date. Today in Baltimore the basement area is being exposed to get more habitable cubage (hillside house principle) in low cost row housing and in semi-detached brick houses selling from \$12,500. There are fully improved hillside houses with five bedrooms selling for \$17,500.

CHARLES E. POWELL  
Chief Land Planner, FHA

## Preview House reprints

Send 20 reprints of "25 New Product Ideas in this 1959 Preview House" (H&H, June) for distribution to key people in our sales force.

DEPT OF WATER & POWER  
City of Los Angeles.

... interested in 500 copies ...  
HARTFORD ELECTRIC LIGHT CO

We would like a quotation on 1,000 copies ...

PUGET SOUND  
POWER & LIGHT CO

... send 100 copies of the heat pump reprint.

IOWA ELECTRIC LIGHT &  
POWER CO  
Cedar Rapids.

We need at least 100 copies for distribution to key personnel. ... quote prices on an extra 500-700 copies to be sent to field personnel for selected distribution to builders, architects, dealers, and others ... There is a possibility we will make an even broader distribution so please also quote prices on 2,000-2,500 copies ...

ALABAMA POWER CO  
Birmingham.

... very much like 100 copies.  
MISSOURI POWER & LIGHT CO  
Jefferson City.

... 60 copies for an internal distribution.

WEST PENN POWER CO  
Greenburg, Pa.

... like very much 50 copies.

JERSEY CENTRAL  
POWER & LIGHT CO  
Asbury Park, NJ.

... 20 or 30 reprints to send to each district and division manager in our company.

EASTERN SHORE PUBLIC  
SERVICE CO  
Salisbury, Md.

We would like 50 reprints for internal distribution and your quantity prices also.

DUKE POWER CO  
Charlotte, NC.

... 100 copies of the heat pump reprint.

WEST TEXAS UTILITIES CO  
Abilene, Tex.

Please send 250 copies to us.

DALLAS POWER & LIGHT CO

... 100 copies for our sales people.

LOUISIANA POWER & LIGHT CO  
New Orleans.

6 more copies ... would like to see it in the hands of a few of my close business associates.

ATLANTIC CITY ELECTRIC CO  
Atlantic City, NJ.

Could we have 40 copies ...

MONONGAHELA POWER CO  
Fairmont, W Va.

Reprints are still available. Prices range from 10¢ per copy to \$87.50 per thousand. Write for further quotations.—ED

## "Now Is the Time ..."

... another H&H "haymaker"—all the way from the floor!

CLYDE J. VERKERKE  
Design & Construction  
Charlottesville.

... should be read by every builder in the country. It hits the nail right on the head. Keep up the good work.

GEORGE R. PERKINS  
executive vice president  
Birmingham (Ala) HBA

I am especially concerned with the trade-up program and the fact that the mass market is in the trade-up field. Perhaps lower income families should buy existing or older houses:

1) Older houses are usually served by public transportation.

2) Minimum expense is necessary to establish lawns.

3) Higher income families can better afford the transportation and other added expense of living farther from their place of employment.

J. W. UNDERWOOD  
The Underwood Co  
Jackson, Miss.

## "How to Sell"

Congratulations, on the May issue. It is one of the best issues of its type I have ever seen and one of which you and your whole organization should be extremely proud.

DON MORRIS  
Barber-Colman Co  
Overdoors Div.  
Rockford, Ill.

The May issue is three hours of fine reading on merchandising. Thank you for doing a splendid job for the builder in a hard selling year.

WILLIAM K. McDONALD, builder  
Indianapolis.



## The Centennial in FRUITWOOD

A new design  
finished in  
Fruitwood to  
celebrate more  
than 100 years  
of leadership

"I-EXCELL" ... in American homes for more than 100 years! Over a century of leadership in kitchen cabinetry design and construction proves why I-XL can rightfully claim its name!

See how I-XL's pre-built, pre-finished hardwood cabinetry provides custom-built quality at production-line prices.

DISTRIBUTION EXPANDING AGAIN! If you are a dealer,

**THE I-XL FURNITURE CO. INC.**

continued on p 84





Finished in beautiful Fruitwood with smooth, clear-span surfaces and concealed hardware. Simplicity of design blends with the most modern of today's interiors. Kitchen Design by Greta Lederer

## ... AMERICA'S MOST MAGNIFICENT KITCHEN IN RICH SEASONED HARDWOOD

FRUITWOOD! Fashion's newest expression in hardwood kitchen cabinetry... stocked in 144 ready-to-arrange coordinated units that give you *immediate* access to infinite one-of-a-kind kitchen combinations. Here is truly the ultimate in custom kitchen luxury...rich with the warmth and beauty that natural grain wood alone

possesses, characterized by the utility, quality and conveniences that are normally achieved only through costly on-the-job construction. For a fraction of ordinary time and expense, you can pattern any kitchen to any variety of tastes simply by letting the *combination* of pre-built units provide the I-XL custom touch.

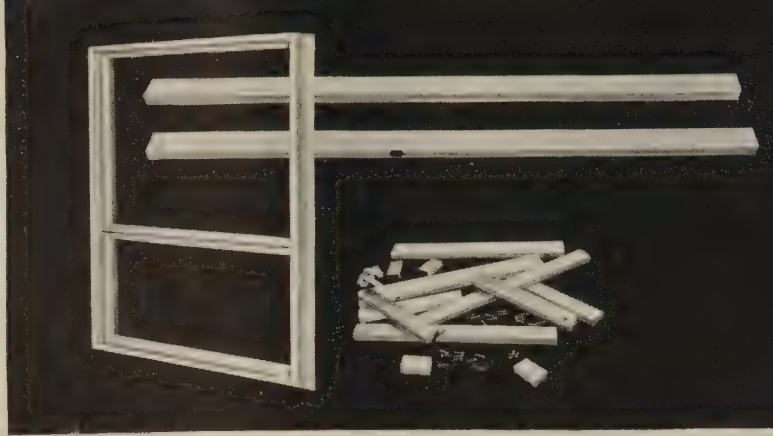
builder or distributor, write immediately to I-XL Sales Dept., 620 N. Michigan, Chicago for further information.



**620 NORTH MICHIGAN AVENUE • CHICAGO 11, ILLINOIS**

Factory in Goshen, Indiana





**Seven steps instead of 22!** Simply cut two load-bearing struts to fit header construction you use. Nail Strutwall to adjacent studs, tilt up with wall. You eliminate two thirds of all conventional framing, installing and finishing steps. Save hours and dollars on every house you build or design.

**Saves materials, costs less installed!** New Strutwall eliminates two long cripples at top, requires only two 2 x 6's instead of heavier headers in multiple openings. It also saves buying, cutting, fitting these other materials—plus waste and nails. Builders report a lower installed cost over even inferior conventional windows.



**“New Andersen  
Strutwall gives  
TRADEMARK OF ANDERSEN CORPORATION  
me lower total  
installed cost,  
extra sales  
appeal, too!”**

*says Knoxville builder of quality homes*





**Fits tighter, looks better!** Because all parts of the Strutwall are precision nailed or nailed and glued at the factory, you get the strongest, tightest possible joining of window and wall. Absence of separate casing gives cleaner, trimmer lines...more glass area. Result: True Andersen window beauty at the lowest possible cost.

**I**N just seven hours, I can construct and roof a 42' x 28' shell using new Andersen Strutwalls," reports R. H. Smith, Jr., Knoxville, Tennessee. "That's a saving of four man-hours over what it used to take me with conventional windows.

"What's more," continues Mr. Smith, "I used to frame my rough openings at the shop and haul them all the way to the site. Now I save this shop time plus materials. My men can install new Strutwalls quickly and easily right on the job.

"Instead of winding up with some ordinary, low cost

double hungs in my homes, Strutwalls give me all the beauty and sales appeal of Andersen Windows—at a lower total installed cost. And their extra sales appeal helps. I sold my first house exactly one hour after the walls were up!"

For complete information on the new Andersen Strutwalls, just telephone your local Andersen Dealer—or write directly to Andersen Corporation, Bayport, Minnesota.

WINDOWALLS are sold by established lumber dealers throughout the United States and now in Canada.

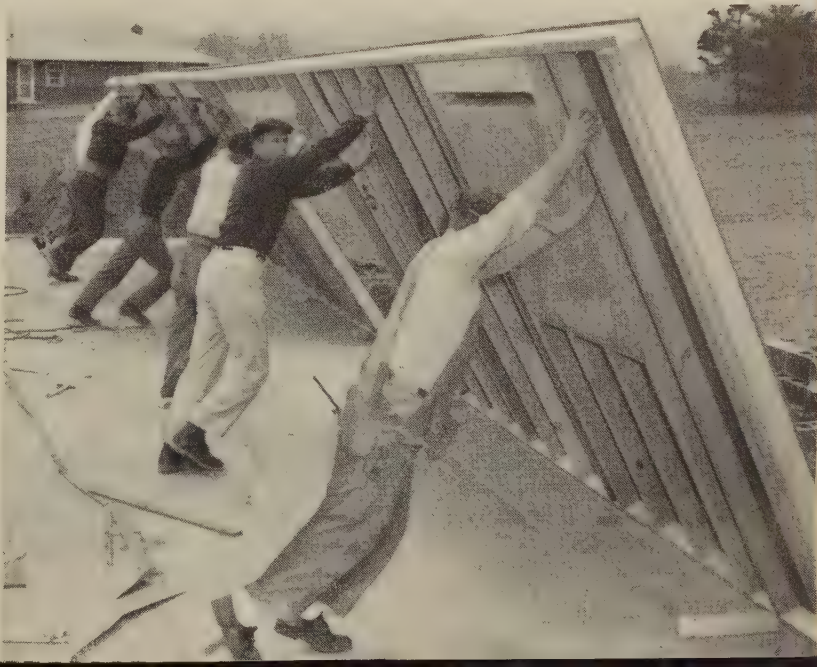
# Andersen Windowalls

TRADEMARK OF ANDERSEN CORPORATION

ANDERSEN CORPORATION • BAYPORT, MINNESOTA



**Strutwalls are nailed in place... wall is tilted up**





# CROSSETT

**ROYAL OAK  
FLOORS -  
are  
FAMILY  
FLOORS**



Crossett Royal Oak floors are "warm" floors. They impart an atmosphere of cozy comfort and will last the life of a home. Superior manufacture of Crossett Royal Oak Flooring assures a new home owner extra valuation which helps secure easier financing. Architects, designers, and builders know that Crossett Royal Oak floors assure basic home appeal and create buyer satisfaction. To build homes with basic sales appeals, specify Crossett Royal Oak Flooring.

## CROSSETT

L U M B E R C O M P A N Y

A Division of The Crossett Company  
CROSSETT, ARKANSAS



## Letters

### HLBB indictments

I read your article "Four s&L Men Indicted as HLBB Hits Self Dealing" (Apr. News) with a great deal of interest. To keep the record straight, according to our local newspapers, after two Miami grand juries had looked over the evidence without taking any action, the US District Attorney went to Tampa and obtained the indictments there.

Although Messrs Meyer, Abess, and Becker did resign as directors of the Miami Beach Federal Savings and Loan Assn under pressure from representatives of the Federal Home Loan Bank Board, I am still a member of the board.

To the best of my knowledge, there have been no false entries on the books of the Miami Beach Federal. All the records of this association have always been open to the Federal Home Loan Bank examiners and we have never failed to comply with any suggestion or request from them.

Miami Beach Federal has never lost a dollar on any mortgage and we have never made any mortgage which was not adequately secured. . . .

Members of the Federal Home Loan Bank Board are indeed "ever-reticent." On January 24, 1958 they called a special meeting of the Miami Beach Federal board of directors and read a supervisory report charging us with, among other things, unsafe and unsound management and failed to leave a copy of the report with us. I wrote to John Wyman, chief supervisor, Federal Home Loan Bank Board on March 5, asking for a written copy of the charges and he has not acknowledged receipt of my letter. We were denied the opportunity to even read the charges much less defend ourselves against them.

During 1957, Miami Beach Federal was very strong financially in a \$40 billion industry and I believe that our association ranked with the first ten federal s & Ls in the country comparing surplus to deposits. This does not appear to me to be unsafe or unsound management.

I fail to understand how or why the "supervisory agencies" such as the HLBB have gained so much power over the businessmen of our country. I further do not understand why this power has been placed in the hands of men who have had little or, in most cases, no experience in the savings and loan business and who are certainly not qualified to criticize the management of one of the oldest and largest s&L associations in the country.

. . . It seems obvious to me that members of the HLBB have deliberately withheld information regarding their rules and regulations so that they can take "supervisory action" and gain control of successful institutions throughout the country. I strongly object to their practice of changing the rules in the middle of the game without telling the players.

W GEORGE KENNEDY, director  
Miami Beach Federal Savings  
and Loan Association

H&H erred in reporting Reader Kennedy had resigned as a director of Miami Beach Federal s&L. The "Jacksonville indictments" were returned by the Tampa grand jury, but covered land deals in Jacksonville Beach.

The HLBB has long conducted its public business with a secrecy reminiscent of the mind-your-own-business attitude that got FHA into so much trouble in 1954.—ED



# Next Commissioner Mason plans to



Roy Stevens

## UPGRADE FHA APPRAISAL METHODS TO RECOGNIZE AND ENCOURAGE QUALITY

### 1954 Round Table urged this action:

Perhaps the importance of Mr. Mason's action can best be explained by quoting briefly from the 12-page report of an industry Round Table sponsored by HOUSE & HOME early in 1954: (H&H, Mar '54).

"On this hard truth all of us are agreed—architects, builders, suppliers, lenders, appraisers, and research scientists alike:

"Since the war the appraisal policies and practices of FHA have been an adverse factor on housing quality and progress. FHA has become a leveling influence rather than an upgrading influence—leveling up from the bottom, but leveling down from the top. . . .

"In its appraisal policies and thinking FHA has not kept pace with the revolution in home building which FHA itself made possible; FHA has not kept pace with the revolution in architecture which offers home building its best hope of providing better living at less cost.

"FHA has discouraged builders from offering quality beyond the minimum property requirements by not giving adequate credit for its added cost. FHA has blocked progress toward better design by penalizing design change and innovation in its valuations. Today the odds are loaded against quality at every step in the FHA appraisal procedure. . . .

"Appraisals are the one critical housing problem the President's Advisory Committee on Housing Policy did not try to solve. But unless faults in FHA appraisals are corrected, the success of all other solutions and all other programs will remain in doubt and jeopardy".

Now that FHA has liberalized its minimum income requirements and modernized its minimum property standards, Commissioner Norman Mason is tackling the most critical and most criticized of all FHA problems—the appraisal methods by which FHA determines the valuation and thereby, in nine cases out of ten, the price of the houses it insures.

To help him in his major reform, Mr Mason has invited a committee of civic and home building industry leaders to work on the problem with him. To each member of the committee he wrote:

"The time has come, I feel, when I need to take a fresh look at how the value of homes is affected by the use of quality products, by better land planning, by construction that reduces maintenance expense, and by design factors which improve desirability. To do this I need the help of informed people like yourself.

"So I am appointing a committee of civic and home building industry leaders to re-examine our valuation policies. Our objectives are to help all Americans have better homes to live in at prices they can afford."

To serve on this committee he named:

CLIFFORD J BACKSTRAND  
President, Armstrong Cork Co

RICHARD BOOTH  
Past Pres, Nat'l Assn Mutual Savings Banks

WATSON BOWES  
Past President, American Institute Real Estate Appraisers

CHLOE GIFFORD  
President, Gen Federation of Women's Clubs

GEORGE GOLDSTEIN  
Past President, American Institute of Real Estate Appraisers

JOSEPH GRAZIER  
President, American-Standard

JOSEPH HOLLINGSWORTH  
Lumber Dealer, Lowell, Mass

EARL J MORGAN  
Vice Chairman, Committee on Investment & Mortgage Lending, US Savings & Loan League

W FRANKLIN MORRISON  
President, National League of Insured Savings Assns

WALTER C NELSON  
President-elect, Mortgage Bankers Assn

SYLVIA PORTER  
Syndicated Financial Columnist  
New York Post

PERRY PRENTICE  
Editor & Publisher, HOUSE & HOME

C K RIEGER  
Vice President, General Electric

NORMAN SCHLOSSMAN, AIA

MILFORD A VIESER  
Immediate Past Chairman  
Housing & Mortgage Lending Policy Committee, Life Insurance Assn

continued



# THE REVOLUTION IN HOME BUILDING

*In announcing his decision to restudy and upgrade FHA valuation methods and procedures, Commissioner Mason told a meeting of building industrialists and mortgage lenders:*

Everywhere I go I see the proof of a housing revolution. But too few people seem to be thinking in terms of this revolution. Too few people seem to understand what is actually happening.

Just as we look back on the industrial revolution of the past century and date its beginning, I believe a later generation will look back to 1934 and say FHA started the Housing Revolution of the Twentieth Century.

Looking back is all right for historians. It is not all right for businessmen.

There are facts to be dealt with NOW. There are plans to be laid for the FUTURE. We must lay those plans in the terms of the Housing Revolution that started 24 years ago—was interrupted by a World War—and is now bounding ahead again.

Let's look at the facts of this revolution and the part FHA is playing in it.

## **1. FHA created a whole new market for home ownership**

People who before could expect only relatively inadequate rental housing suddenly were given the opportunity to own a home of their own.

FHA-insured mortgages brought an upsurge in home ownership by featuring low down payments, long terms, and level monthly payments that included amortization, interest, taxes, and insurance.

Before 1934 home ownership was pretty well limited to the middle aged group who had been able to save enough to make a husky down payment of 40% and sometimes more.

The nominal down payment and moderate carrying cost broadened the whole base of potential home owners, from the young married couple just starting out to the elderly folks living on a limited pension.

## **2. FHA created a uniform financing vehicle**

Another revolutionary aspect of housing today is the standard mortgage form—endorsed by FHA—good in the secondary mortgage market any place in the United

States. That wasn't easy—it took enabling legislation in state after state to get a standard mortgage.

There is no need to tell you what this has meant in equalizing the flow of money into housing. More than any other single factor this has made mass building operations possible. There were no mass builders when FHA started. Also, there were only a handful of mortgage bankers, because they did not have a national commodity to market.

## **3. FHA created building standards**

FHA set up standards that had to be met in home construction if the mortgage was to be insured. Perhaps this is the least known contribution FHA has made to the Housing Revolution, for unfortunately, the industry did not make the most of it the way the lenders did in merchandizing the standard amortized mortgage.

Perhaps FHA itself has not made as much of it as we should. Perhaps we should do more to tell the public about the quality of insulation, equipment, labor saving devices, air conditioning, good design, and a score of other things that make for good living.

## We should tell people more about quality

We must not underestimate the technical know-how of American home owners once their interest has been aroused. Look at the hobbies Americans have that are really technical—short wave radios, tying fishing flies, woodworking, and the like. It is part of our vernacular to say a man is “a bug” about sport cars or hi-fi, but if you said a man was “a bug” about housing, the reaction would be that an exterminator was needed.

If the standards for good housing were presented so everyone could understand them, wouldn't they have a popular appeal? The consumer is not going to spend his money for quality unless he really understands why it is quality. Nobody can blame him for that.

This spring FHA made a study of last year's typical home buyer under the FHA-insured mortgage plan. We found that

the typical buyer was paying less for a home than we estimated his income could easily support.

Most American families, according to FHA's study, spend a little less than a fifth of their income on housing. We in FHA believe they can afford to spend more if they want to.

As I see it this country needs a well rounded housing program—an orderly program of full production for the industry—and good housing for all American families. A well rounded housing program does not mean just building low cost housing with minimum standards. Neither can it mean building only quality housing regardless of cost. Nor should it be taken for granted that we can have a complete housing program just because financing is readily available.

To meet the total market potential the housing industry must consider the whole broad area of consumers' needs,



desires, and ability to pay for what they want.

Let's be more specific. There are certain guideposts that definitely point the way toward accomplishing this goal.

1. Value is created by design that will stay desirable through the years.  
Consumers—no matter what they are able to pay for a house—don't want to be saddled with paying for a fad type house long after the fad has passed but the mortgage lingers on.
2. Housing must be well located and well landscaped in an attractive setting.
3. Housing must be sound construction if the desire to own a home is to remain a national incentive.
4. Consideration must be given to community needs for schools, shopping centers, churches, and recreation.
5. Housing must have the right appeal to excite pride of ownership.
6. Housing must include the useful equipment needed to make housework pleasant—equipment home owners will be proud to own and display to their friends.
7. Housing must give the home owner lasting value in different price ranges through quality materials and good workmanship.

These are vital needs for the whole cross section of housing in this country.

In my opinion, the time has come when we should stop talking about the \$12,000 house—or the \$15,000—or the \$20,000 house.

We need to talk about the kind of quality housing which people in different income brackets can afford—or are willing to make sacrifices for because it promises so much in happy living. It is not meeting a market to offer home buyers something they cannot afford.

In evaluating the well rounded housing market in America today, here are some facts about incomes that should not be overlooked:

20% of urban families are 25 to 34 years old and have a median annual income of about \$5,200.

24% of the urban families are 35 to 49 year's old and have a median income of \$5,700.

22% are 45 to 54 years old and have a median income of \$6,100.

16% are 55 to 64 years old and have a median income of \$5,300.

13% are 65 and over and have a median income of \$3,100.

The Housing Revolution will go on. Its course can be set by people like you—but it will move on whether you act or not. If you lead wisely and direct its course, it will have greater accomplishments than if you sit idly by and watch.

## FHA has just taken four long forward steps

FHA has just revised its Minimum Property Standards. A committee of American businessmen reviewed our requirements and made suggestions. Then the FHA staff carried out their recommendations. FHA recognizes the trend in the Housing Revolution toward more lasting quality in houses. We proved we recognize it by taking action to revise our minimum property requirements. We know these standards are still minimum in character. They are the starting point. We know, too, that many builders buy quality grades well above our minimums. They do not want buyers to become discontented as they see better quality housing being constructed in an adjoining subdivision.

Just recently FHA has revised its mortgage credit philosophy. An industry advisory committee of businessmen and women made suggestions. Then our staff carried out their ideas.

Right now we are making plans for another industry advisory committee to meet on Sept 24 and help us review our valuation concepts in the light of increased desirability, land planning, quality products, and construction that reduces maintenance expenses.

### **FHA is also trying to smooth the way for trade-in financing**

We have made a start. The industry needs floor financing for old houses along lines similar to used car financing. We need mobility. We need freedom to transfer title without excessive taxation and excessive expenses.

What is industry doing to exert its leadership in the Housing Revolution? What role can we expect you manufacturers to play?

Can we count on your developing the second-time buyer market as well as new shelter housing? Will you accept the principle that the way to sell new houses to millions of present home-owning families is exactly the same way that other industries sell their product to adequately transported car owners, adequately covered chemise wearers, adequately amused entertainment seekers; that is, to say, will you offer them something so much better and more desirable that they won't rest until they have upgraded themselves?

The average family just couldn't care less about the studying and plates, the concrete mix and mortar, the know-how and products that go into a house, any more than they

care about the mechanics of air-cooled brakes, the technical difficulties of bending glass windshields, the formulation of enamel in their cars. For brakes, read SAFETY; for bent glass, read SWEEPING VISION; for enamel, read A RAINBOW OF COLORS. Will you help your industry to develop "LIGHT AND BRIGHT" as a synonym for windows; "UPKEEP GOES DOWN" to mean low-maintenance materials; "LIVING COMFORTABLY" to be associated with insulation, ventilation, air-conditioning; and "HOUSE POWER" as equivalent to adequate electrical capacity?

### **We all have plenty of realities; now we must seek vision**

Can we assume that singly, or jointly, there will be carried out the kind of research, in new materials and new applications, to guaranty that the materials and products that go into tomorrow's house will be better and/or lower in cost than those on the market today? FHA is conducting a modest research program, but we think you in industry should actually be carrying it out instead of us. We have great trouble getting industry to even set standards for basic building materials.

Do you think in terms of new and simpler ways to incorporate your products into a house when you are planning their design and fabrication?

Do you think of how the sale of your product can best be financed by the home buyer? Have you considered the advantages to consumers of your product of a wider use of FHA insured financing? What it could mean in broader markets and better standards of quality and durability?

What are you doing to give the people who assemble your products into a house something that is above minimum standards—something that will make the customer's eyes sparkle and his hand reach out to sign a contract? If you know anything about the builders who assemble your materials—and you should—you know they are demanding items like this. That's what the American home buyer wants in the house he is going to buy.

And finally, will you give this industry the leadership that you have in such abundance. Will you provide the stability and responsibility that the manufacturers and lenders and other basic industries have long ago assumed as a duty.

The Housing Revolution moves on. Are you a part of it, or don't you care about the future of America? /END



## **FORECAST FOR '59 HOME BUILDING:**

by Miles L. Colean

Home Building's No. 1 Economist

# **The buyers are ready**

# **The money is ready**

# **It looks like the best year since '55**

The graph at upper right tells it all: the downswing is off, the upswing is on; this year is turning out to be a good year for home building (*see details p 84 H*); next year will be even better.

In 1959 private nonfarm starts should reach 1,155,000—about 83,000 more than this year. A probable 60,000 government-built units will hike the total to 1,215,000—some 181,000 short of 1951's postwar high and 113,000 short of 1955.

Of new private units, 970,000 will be single family houses. The balance: 35,000 units in two-family houses, 150,000 in apartments (buildings for three or more families).

Next year's dollar volume of new residential construction should hit about \$14.6 billion—\$13.75 billion for private building and \$825 million for public.

### **Next year looks good on two major counts:**

1. You can expect a comfortable supply of mortgage money (*for the reasons why, see facing page*).
2. You will be operating in what should be a favorable economic climate for home building. Incomes will be up. The recession will have run its course. The probable mood: optimistic—but not recklessly so.

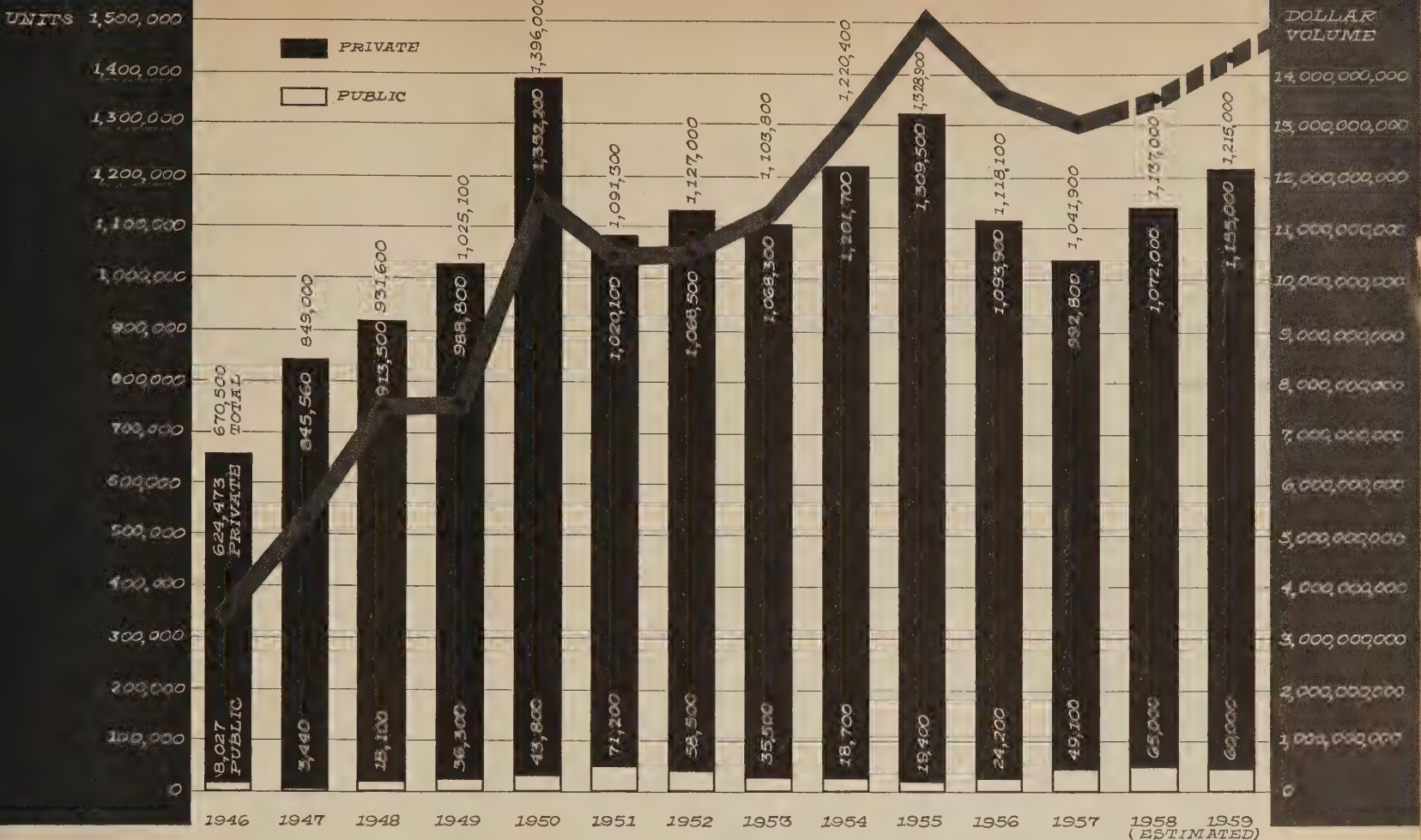
### **At least five big current trends will carry into '59:**

You can expect 1) a greater proportion of merchant built houses, 2) a slightly lower average price per unit, 3) more private apartment buildings, 4) more single-family houses in the public housing programs, and 5) more prefabs (*see p 84F for the trends in detail*).

### **What's more, prospects are also good for the long pull.**

In the next three or four years, steady growth—but no boom—is likely. More families will be earning enough to buy new homes, and there should be no problem of surplus housing (*see p 84G for what's ahead in the 1960s*).





**NONFARM HOUSING STARTS WILL KEEP RISING** in '1959, and probably top this year by about 7%. Expected '59 total: 1,215,000 units, of which 1,155,000 will be private starts. Dollar volume will

climb to around \$14.6 billion. '46-'57 data: Bureau of Labor Statistics and US Depts of Labor and Commerce. '58 and '59 estimates for all graphs in this forecast are by M L Colean.

## Here is why there should be enough money in 1959

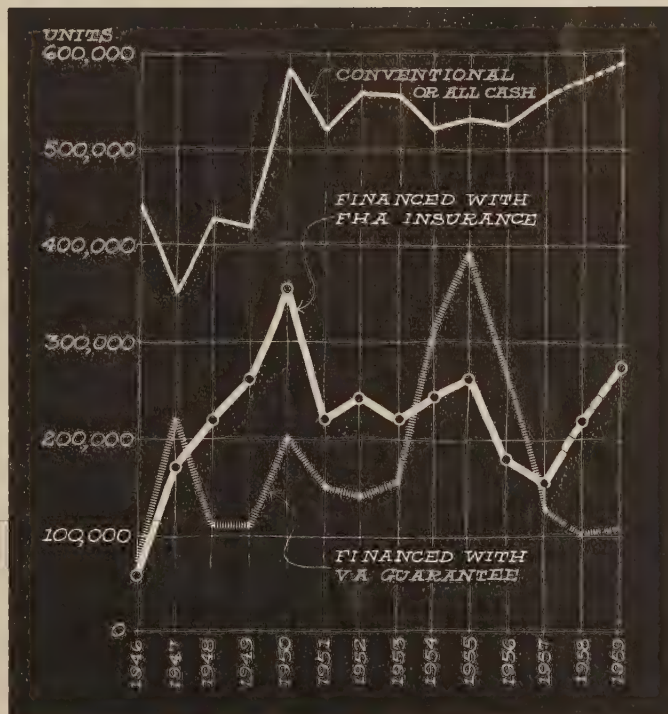
The way it looks now, there should not be enough competition from other borrowers to make home loans—especially FHA mortgages—less attractive to lenders like banks, pension funds, and insurance companies.

Also, savings institutions—particularly S&Ls—are expanding their assets, should thus offer a healthy supply of funds for conventional mortgages.

FHA financing should cover roughly 275,000 single-family starts—55,000 more than this year and almost 119,000 more than in '57. That forecast is based on the assumption that the government will be wise enough to do two things: 1) not lower current FHA interest rates; 2) raise them whenever necessary to let home building compete for funds with other borrowers.

Right now FHA's ceiling is barely high enough to meet non-housing competition. This competition is not likely to slacken in '59, and there's a possibility it will increase in the second half of the year.

What about VA mortgages? They don't look like the big factor they once were—in '59 they probably won't account for more than 110,000 units. Their interest rate is low (4¾%). They are still subject to heavy discounts in most parts of the country except where directly or indirectly financed by the government. But there is, of course, always a chance that Congress may sometime in 1959 pass legislation that will revive the important part VA once played in the mortgage market.



**BIGGEST BOOST IN PRIVATE SINGLE-FAMILY STARTS** will be in FHA-financed houses. But most of next year's financing will still be conventional. '46-'57 data: FHA, VA, Bureau of Labor Statistics.

continued



## Here are five important trends for 1959

### Trend No. 1: merchant builders will get a larger share of the single-family house market

At least 80% of all professionally built, single-family houses will be merchant-built. At the same time, the number of custom-built houses by contractors and owners (acting as their own contractors) should be the same or a bit higher than in '57 and '58.

Why the swing back in favor of merchant builders? Simply because of the revival of VA and FHA activity. Merchant builders' share of the total dropped in '56 and '57 because they were hard hit by the diversion of funds from insured and guaranteed mortgages.

### Trend No. 2: private apartment building will keep up its comeback, should near its postwar peak

Next year's total should hit 150,000 units—only about 10,000 short of the peak years ('49 and '50) under FHA's Second 608. But there will be one big difference from '50: the roles of conventional and insured financing will be reversed—FHA was responsible for 71% of 1950 units, will do well to cover 15% in '59.

Here's why apartment financing under FHA has taken a back seat: 1) FHA's current statute, unlike 608, sets tight requirements for cost certification; 2) FHA's interest rate is too low to attract funds for apartments; 3) much of today's demand is for luxury apartments which may readily be financed conventionally.

### Trend No. 3: the average price per housing unit will be slightly lower than this year

Despite rising costs, two factors will hold down the average price: 1) increased private apartment building—most apartment units are smaller and cost less than a house; 2) the widespread view among builders that people want more low priced houses.

But don't expect this downtrend in the average price (it started in '58) to last. If a 24% fall in home building in two years ('55 to '57) can't produce a real cost cut, it's

doubtful that a two-year rise of the same size will do so. What's more, there's no proof that the public wants a stripped-down model. Builders, like automakers, have probably tended to over-gadget their products. But you can be pretty sure the public will demand as much comfort and quality as it can afford.

Up through '57, average price rose steadily because of 1) rising costs (particularly labor; 2) greater average size per unit, and 3) improving quality. Too, the '56-'57 slump pinched hardest in the lower price bracket. This year the upward price trend was reversed by the spurt in merchant building and the weight of apartment building. But although materials prices have eased off slightly, overall costs have resisted recession—and actually climbed a fraction of a percent.

### Trend No. 4: public housing will continue its swing to single-family dwellings

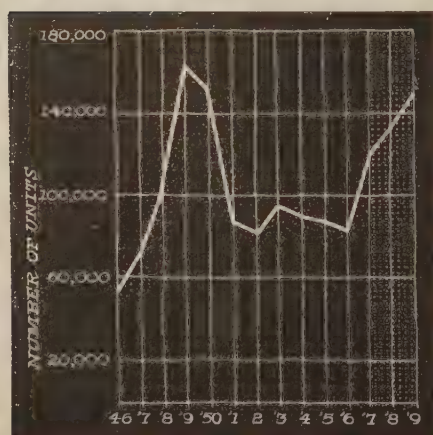
Roughly two-thirds of government-built housing will be for military personnel (mainly financed through FHA's Title VIII). And the bulk of it will be made up of single-family dwellings. Already in '57 and this year, no more than one-third of public housing was in buildings of more than three units, and there were only a few two-family structures.

Military housing is pacing the trend to single-family dwellings. But some local housing authorities have also been experimenting with them.

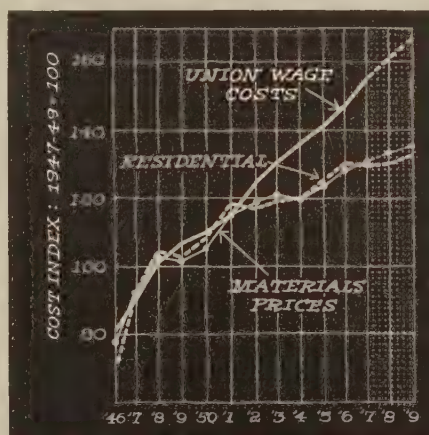
Next year's public housing volume will come to about 60,000 units. That's 5,000 less than this year and reverses the sharp upswing that started in '57 and continued in '58.

### Trend No. 5: home manufacturers will keep moving ahead, should mark up another good year

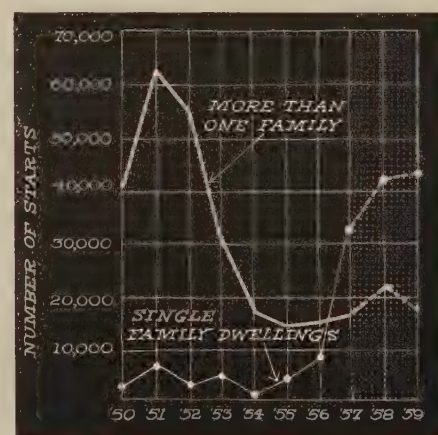
Prefabbers did surprisingly well during the recession. Despite serious financing problems, they shipped 94,000 units in '57, now count on boosting that total to 105,000 this year. Next year they should do still better. About 5% of prefab production is for government housing, mostly military.



**PRIVATE APARTMENTS** (for three or more families) should account for 150,000 new units in '59—15,000 more than this year. '46-'57 data: Bureau of Labor Statistics.



**RESIDENTIAL COSTS** will top '58 by 1.9 points. '46-'57 data: E H Boeckh & Assocs (residential); US Labor and Commerce Depts (wages and materials).



**PUBLIC HOUSING** will hit new high in single-family dwellings, mostly Capehart units for military personnel. '50-'57 data: Bureau of Labor Statistics.



# Here is why business should stay good into the 1960s

You can look for steady business growth in the next three or four years. But don't expect it to be spectacular.

Why no boom? Because the net increase in families will be relatively small—around 900,000 a year. And the rate of increase will actually fall until a substantial pickup starts about 1964.

## Biggest source of sales: more and more families will be able to afford a new house

These 1956 figures (latest available) from the Commerce Department tell the story:

- From '53 through '56, an average of 1,010,000 nonfarm families a year reached the \$5,000-and-over income group. It takes a \$5,000 income to buy a \$12,000 to \$18,000 house.

- In the same period, an average of 300,000 a year climbed into the \$7,500-and-over bracket. A family with a \$7,500 income can swing a house costing about \$20,000.

- By the end of '56, 61% of nonfarm families had incomes over \$5,000, and 28% had incomes over \$7,500.

Did this rate of income growth keep up in '57 and the first half of '58? Probably not. But it is resuming now and should be in full force next year.

## Another source of sales: home building has no problem of excess inventory

Even after two years of recession, vacancies have increased only slightly. This means the new expansion will begin in the kind of clean market other industries must envy.

Will the clean market stay that way? It looks like it. Here's why:

Every year from '50 through '56 about 475,000 dwelling units were removed from the market by disaster, demolition, abandonment, and change to other uses. Yet in those years the urban renewal program—one of two big causes of demolitions—was just getting under way. And the highway program—the other big cause—had hardly started. To keep both programs on schedule, total demolitions and withdrawals will have to hit 500,000 a year.

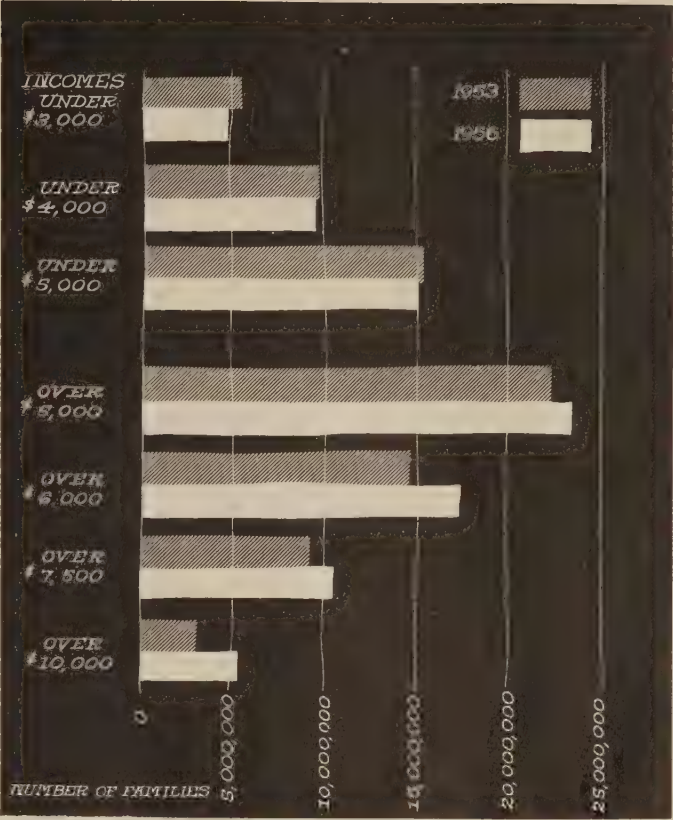
So a vacancy problem is not likely. Fact is, the problem may be to build enough homes to avoid delays in urban renewal and highway construction.

It all boils down to this: higher family incomes, a high rate of demolitions, and a low vacancy rate should offset the relatively low rate of family formations. Result:

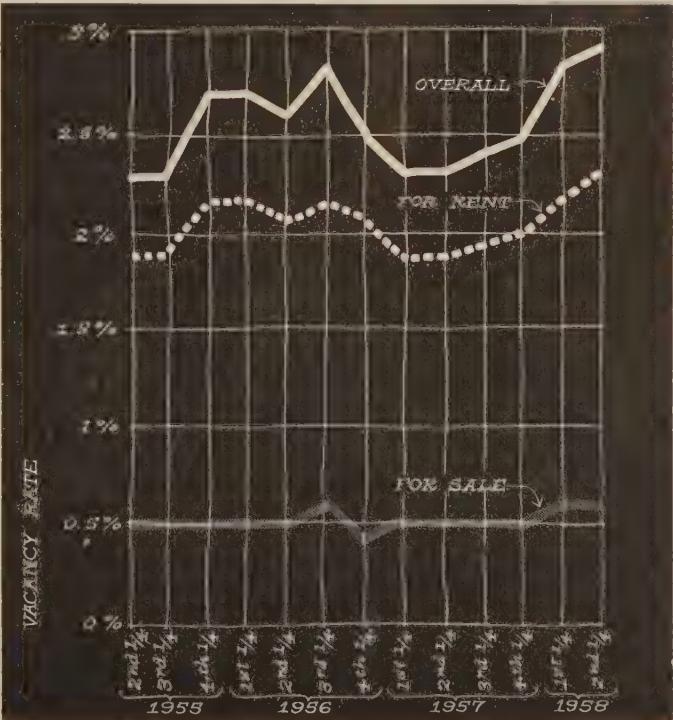
## There should be a steady market for 1.2 million—and possibly 1.3 million—units a year

But if this market is to be fully tapped:

1. The flow of mortgage credit must stay free of violent interruptions.
2. Builders must work to cut costs. Every cost increase limits sales. The public is able but not eager. It appreciates quality and understands a bargain.
3. Builders must sell vigorously. You are competing with every other producer of consumer goods. Your competition has been painfully learning the importance of selling. Unless you do the same, your product won't get what it should have—top priority in every consumer's desires.



**MORE FAMILIES HAVE INCOMES OVER \$5,000** and can afford a new house, and fewer families have incomes under \$5,000. Graph compares income distribution for '53 and '56 (latest year for which figures are available). Data: US Commerce Dept and M L Colean.



**VACANCY RATES ROSE ONLY SLIGHTLY** through first half of this year despite '56-'57 building slump. Next year's outlook: a slight drop in vacancies. Significance of this graph: most vacancies are in for rent—not for sale—units. '55-'58 data: US Census Bureau.

continued



## Here is what you can expect the rest of this year

Home building will wind up 1958 well ahead of 1957.

On a seasonally adjusted basis, every month starting with March tops the preceding month (graph below is not seasonally adjusted). And every month since April has been better than the same month last year.

You can expect a final total of 1,070,000 private starts—77,000 more than last year. That total will break down into 890,000 single-family houses, 35,000 units in two-family houses, and 135,000 in apartments.

The '58 upturn in building shows:

1. The housing market's underlying vigor in the face of recession.

2. The home building industry's resiliency in its response to favorable credit conditions.

As HOUSE & HOME said a year ago:

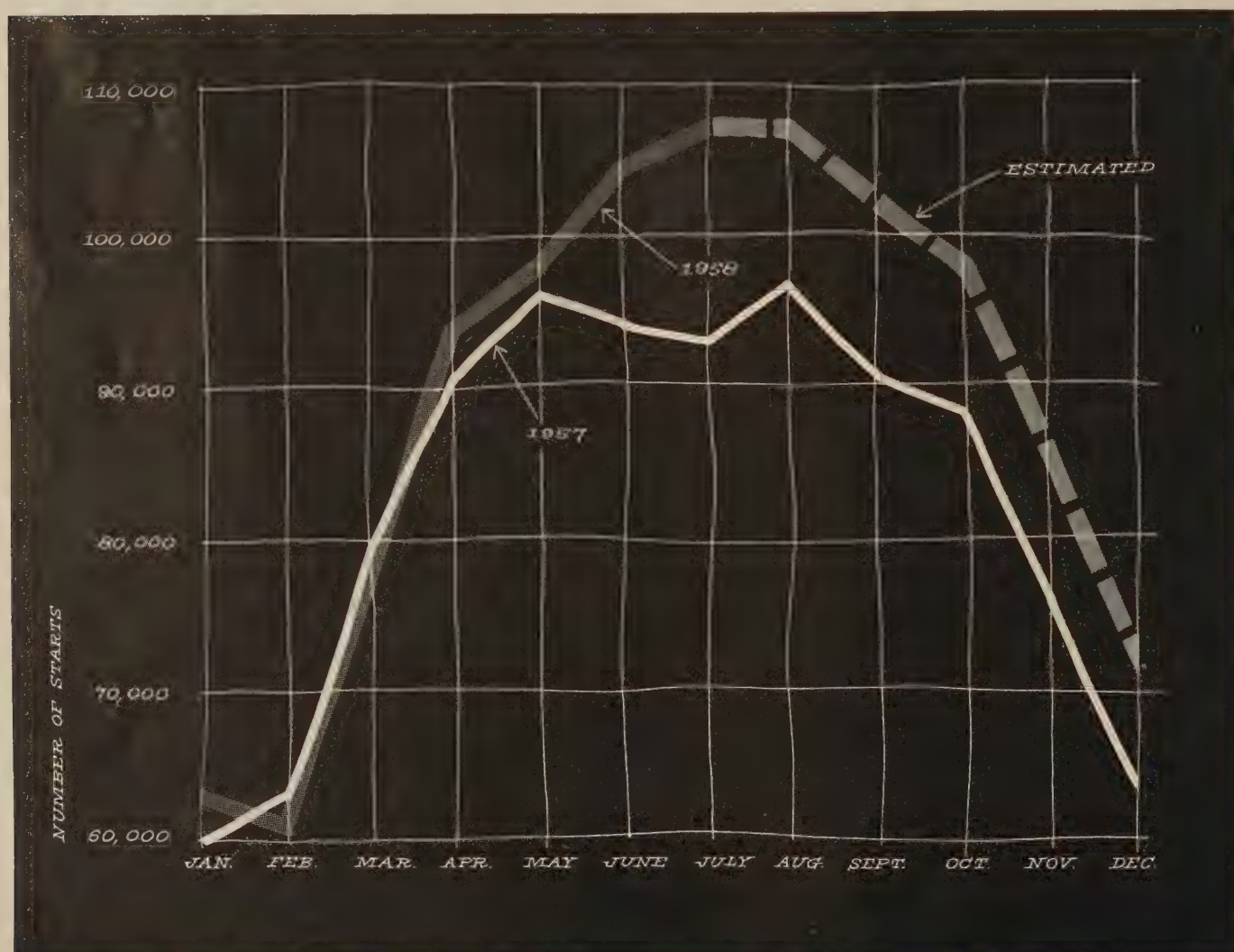
1. Demand was stronger than current output indicated.
2. The '56-'57 fall-off was due, not to over-building, but to interest rate ceilings that put VA and FHA mortgages out of competition in a booming investment period.

You can count on especially big gains this year by two types of home construction—private apartments and government-built housing.

Apartments will jump 13% over last year compared with only 6% for single-family houses. This will be apartment building's second strong year following the slump caused by the cut-off of FHA's Section 608.

The end of 608 dropped apartment units from 159,200 in 1950 to 87,500 in '51. Volume sagged further to 83,500 in '52, rose to 94,000 in '53, sagged again to a post-608 low of 82,300 in '56. Then came the upturn. In 1957 apartment units shot up 45%—to 119,500—despite the decline in single-family construction.

Public housing will be up 33% over last year. Expected total: 65,000 units or 6% of all '58 housing. The big push stems mainly from the Capehart housing program. At least 60% of government-built units will be for military housing. The rest will be built by the federal government (in national parks and forests, for instance) and by state and local housing authorities with or without federal subsidy. Dollar volume of this year's public housing should run around \$800 million.



**PRIVATE SINGLE-FAMILY STARTS IN '58 WILL TOP '57** by more than 67,000 units. Month-by-month comparison shows how this year's starts, spurred by ample supply of mortgage money and easier terms,

pulled ahead of last year in April and built up wide lead by July. Economist Colean sees 1958 holding solid monthly edge for rest of year. Data for '57 through July '58: Bureau of Labor Statistics. /END



# With **PREWAY** Bilt-Ins you get compliments from owners . . . not complaints —

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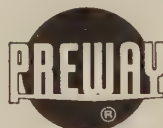
\*Stanley J. Slote's judgment is a respected judgment. This is proved not only by the solid success of his varied developments, but by the regard his fellow builders have for him: he is currently president of the Home Builders Association of Westchester, and a director of the National Association of Home Builders.



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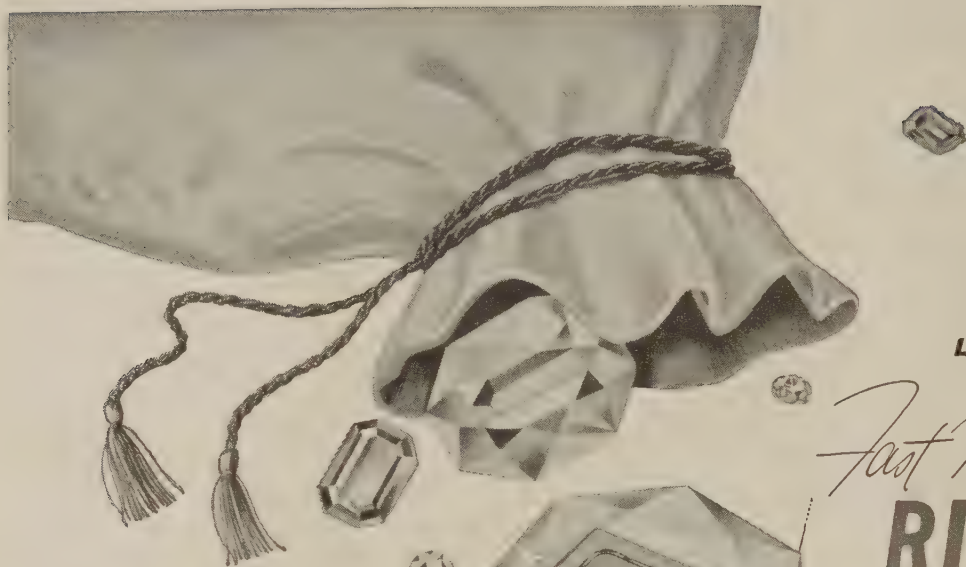
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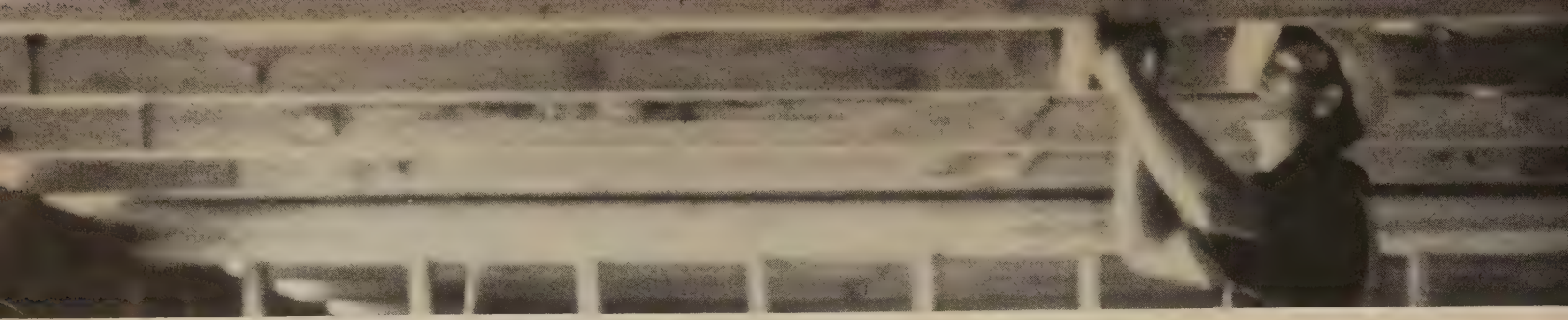
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COVER: Original design by H&H art staff. Photo by Roy Stevens





If you still build like this, you will soon go broke—so...







PLACE

This issue of HOUSE & HOME was developed in collaboration with the Research Institute of NAHB of which Builder Andrew Place is chairman and Ralph Johnson is research director. It was written in collaboration with Home Building's No. 1 construction expert, Dr James T Lendrum.



LENDRUM

this issue is all about

# How to plan and design and detail to build more and better for less

## *It is dedicated to the Architects of America*

to update them on all the new economies and efficiencies of today's production house, to help them collaborate more knowingly with the builders and play a bigger part in providing better homes for millions of Americans, to help them serve the great and growing new market for their professional skills and talents in the \$12 billion a year business of building houses for sale.

## *to the Builders of America*

to help them cut their costs at least \$1,000 a house by helping them share the savings other builders and their architects are working out, to help them squeeze every possible waste out and so put more quality and more sales appeal in, to help them price their product back into the market and so sell many more better homes.

## *to the Building Suppliers and Dealers of America*

to give them a better understanding of the revolution that is fast changing home building into an assembly line industry, to give them a clearer picture of their best customers' methods and needs, and so help them sell more of the parts and sub-assemblies their customers want in the sizes they can use most efficiently.

## *to the Realtors of America*

to help them sell more good new houses by giving them a better understanding of the values they have to sell and a better appreciation of how much better homes efficient builders build now than they built in "the good old days".

## *to the Appraisers and Lenders of America*

to help them invest their money where long term value is best, to help them recognize waste and discourage it, to help them play a more dynamic part in raising the standard of housing by backing the builders who use today's best new methods to build better for less.

## *to the Home Buyers of America*

to help them enjoy a better life by helping them get better homes to live in at prices more of them can afford to pay.



# To get you this advice, we asked the experts— architects, builders and research men like...



Architect  
RUFUS NIMS  
*See pp 123, 131*



Architect  
ROYAL BARRY WILLS  
*See p 95*



Builder  
BOB FOX  
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Architect  
CHARLES GOODMAN  
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Electrician  
CHARLES P. BOBE  
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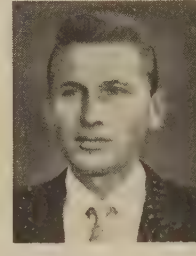
Researcher  
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*See p 148*



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Architect  
PHILIP WILL  
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Builder  
AL BRANDEN  
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Builder  
W. W. HOLDEN  
*See pp 125, 136*



Builder  
BILL UNDERWOOD  
*See pp 98, 99*



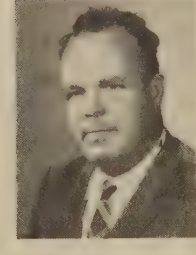
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Builder  
HARVEY FURGATCH  
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DAN PALMER  
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*See pp 111, 148C*



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RUDOLPH MATERN  
*See pp 138, 139*



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RUDARD JONES  
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Researcher  
LEN HAEGER  
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IKE JACOBS  
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BYRON RADCLIFFE  
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Researcher  
GLEN SHIELDS  
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Builder  
TOM LIVELY  
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Researcher  
BILL SCHEICK  
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**DICK HUGHES**  
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**DAVE SLIPHER**  
*See pp 141, 144, 146*



**Architect**  
**NEIL CONNOR**  
*See p 100*



**Lumber Dealer**  
**CLARENCE THOMPSON**  
*See p 100*



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**Builder**  
**ALAN BROCKBANK**  
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**Builder**  
**MARTIN BARTLING**  
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**Researcher**  
**ALBERT G H DIETZ**  
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**Architect**  
**JOHN HIGHLAND**  
*See p 130*



**Builder**  
**BOB GERHOLZ**  
*See pp 128, 131*



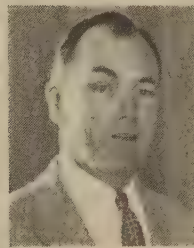
**Researcher**  
**CARL BOESTER**  
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**Builder**  
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**Builder**  
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**Architect**  
**QUINCY JONES**  
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**Researcher**  
**RAY HARRELL**  
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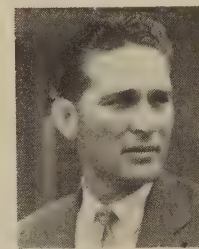
**Builder**  
**BOB SCHMITT**  
*See pp 96, 102, 103, 114, 115, 128, 130, 133, 141, 146*



**Builder**  
**MICKEY NORMAN**  
*See pp 96, 98, 141, 148C*



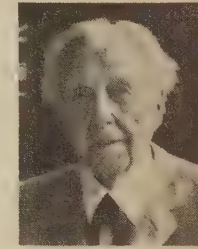
**Builder**  
**BILL LEVITT**  
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**Builder**  
**CLAYTON POWELL**  
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**Builder**  
**JOHN LONG**  
*See pp 96, 123, 131, 141, 144*



**Architect**  
**FRANK LLOYD WRIGHT**  
*See pp 109, 122, 123, 147*

## Design for sales begins with design for savings

"The best way to sell more houses is to offer more people more of the things most people want at a price more people can afford to pay.

"Most buyers want more of everything—more space, more storage, more baths, more appliances, more comfort, more warmth and color, more enjoyment of their land.

"The only way we can sell them all these things they want is to waste less money on things they do not want—things that add neither value nor quality nor comfort to their homes: in brief, to build better for less."

*John Dickerman, executive director  
National Association of Home Builders*





Like the gears of any smooth-running machine





# Design and details for savings

## must be all-of-a-piece design

It must mesh with your method of building. It must mesh with your method of buying. It must mesh with your labor and your scheduling. It must mesh to cut all your costs together—indirect costs and direct costs, labor costs, and material costs.

“Today’s successful builder must know his costs backwards and forward and see all those costs, not as separate items, but as part of a finished whole,” says Nels Severin, President of NAHB. That means, among other things:

He must know time means money and figure its cost in pennies.....*See page 96.*

He must know the high cost of buying parts cheap if they do not fit.....*See page 100.*

He must balance each direct saving against its possible indirect cost.

He must see every dollar spent as a way to save money somewhere else. He must balance each dollar saved against its possible cost somewhere else. For example:

He must know that what he does about basements or no basements can cut his first floor costs or double them.....*See page 132.*

He must know that how he frames his roof will affect the cost of almost everything else.....*See page 114.*

Details that cut costs for carpentry may add costs for plumbing or wiring. Details that save pennies for tilt-up may waste dollars with panels. Details that cost least for one-at-a-time may cost most for production building—and vice versa.

Too few fine custom-house architects understand this tight integration of time and money in the merchant builder’s operation; too few understand his all-of-a-piece economies and his all-of-a-piece economics.

That’s why big Builder Fritz Burns retained a young architect full time for six weeks just to stand around watching his construction crews work before the architect went to his drafting board to design homes for those crews to assemble. That’s one big reason why Architect Royal Barry Wills told the AIA convention: “Most architects are quite unequipped even to consider this field.” That’s one big reason why NAHB Vice-President Martin Bartling says: “Ready-built home building takes a completely different design approach.”

That’s why all the advice from smart architects, builders, and engineers on the next 60 pages will focus on all-of-a-piece design—beginning with . . .



**Fast Builder Powell gets off to a fast start—his four-man framing crew uses panels and trusses**

Photos: Andrews Studios



**8:00 AM** Men and wall panels arrive at site



**8:20 AM** Trailerload of trusses arrives



**9:10 AM** Wall panels are raised on slab

Advice No. 1

## Design to save time... and you will save money, too

"The longer you take to build, the more it will cost you." So says Clayton Powell of Savannah, "America's fastest builder," who turns bare slabs into finished houses on a regular schedule of 14 working days. "A fast schedule will save money for any builder, whether he builds 10, 20, or 100 houses a year."

From coast to coast the fastest builders seem to get the lowest costs. In Phoenix, John Long's schedule from finished slab is 35 days; in South Bend, Andy Place's is 25 days; in Houston, Micky Norman's is 17 days. In Dallas, Fox & Jacobs cut their schedule from 28 days to 18 days after they went to Savannah to study Powell's savings. In Berea, Ohio, Bob Schmitt builds in 28 days from bare ground to move-in, even one-at-a-time houses. Bill Levitt is an outstanding exception: he takes as much as three months to finish a house.

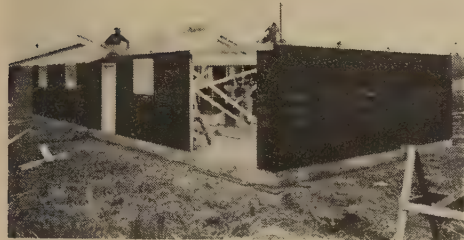
No builder can build fast unless his architect picks every detail with speed and scheduling in mind. No builder can build fast unless he details his components to fit and brings his components to the site ready for fast erection with minimum crossing of trades.

Here are some of the ways Powell saves:

1. *He saves on supervision.* Building 80 houses a year, he never has more than four houses building at once, so one supervisor can easily keep on top of everything, prevent errors, and anticipate problems that would otherwise boost costs.
2. *He saves on labor.* Each trade is called back as seldom as possible. Each man has a regular assignment that keeps him busy full time. Everything fits, so it goes together in less manhours.
3. *He saves on construction financing.*
4. *He ties up less capital.*



**to close in a house by the end of the first day. After that each day has a close schedule planned**



**11:30 AM** Roof trusses are set on walls



**2:30 PM** Sheathing is nailed to trusses



**4:30 PM** House is completely closed in



**2nd day:** Carpenters move into house to build partitions. Four-man crew (two carpenters, two helpers) assembles pre-cut lumber—works smoothly in one big room created under roof trusses. Powell uses panels between house and attached garage but prefers pre-cut studs for other partitions.



**3rd day:** Electrician works inside (light area) while two carpenters and plumber are busy outside. Electrician wires house. Carpenters install prebuilt soffits and cornices. Plumber puts vent stack through roof. Three different trades are separated, do not interfere with each other.



**4th day:** While two carpenters continue outside jobs, heating contractor takes over inside (light area)—installs heat duct in furred-down area over bedroom corridor. Carpenters build forms for porch, walk and driveway. Powell schedules work to keep all men busy all the time.



**5th day:** Electrical inspector checks wiring inside house (light area) while two brick masons and two laborers work outside. Masons start to veneer house while laborers grade between forms for walks and driveway. Electrical inspector knows Powell follows tight schedule, always arrives on dot.



**6th day:** Four-man dry-wall crew starts work inside (light area); three roofers and two brick masons work outside. With partitions built and electrical inspection out of the way, dry-wall crew has interior of house to itself. Roofers lay shingles (asphalt or wood) in less than a day.



**7th day:** Two dry-wall men continue work inside (light area) while two-man concrete-finishing crew begins work outside. Dry-wall crew starts taping joints. If all gypsum has not been hung, two more dry-wall men come in to finish job. Concrete finishers pour and smooth drive and walk.



**8th day:** Two dry-wall men are joined inside by tilesetter. Dry-wall crew has finished bathroom, freed it for tile man. Powell uses mastic instead of mortar to set tiles—says: "It's neater and faster, and joints don't crack if walls are straight and you use a good grout."



**9th day:** Two dry-wall men and two skilled carpenters work inside; two more carpenters work outside. Inside carpenters do not conflict with dry-wall crew but follow it through house—applying trim around windows and installing prehung doors. Outside carpenters hang garage door.



**10th day:** Two dry-wall men, two carpenters, heating contractor and plumber work inside without confusion. Dry-wall crew sands joints. Carpenters hang prefinished kitchen cabinets and install heat vents. Heating contractor installs furnace. Plumber installs fixtures.



**11th day:** Decorator, painter and electrician work inside. Painting time is cut down because paneling and cabinets are prefinished and acoustic tile is often used on ceilings (this also saves day of dry-wall crew's time). Electrician hangs light fixtures and hooks up built-in appliances.



**12th day:** Painter and decorator work inside—have house to themselves and don't have to work around anyone. Powell, who hopes to cut his present 14-day schedule to 10 days, says: "An economical and satisfactory finished wall is the building industry's most important single need."



**13th day:** Flooring contractor works inside; two painters and two laborers work outside. Floor man lays finish floor (Powell uses wide variety of tiles, is also increasing his use of carpeting). Painters finish-coat preprimed soffits and cornices. Laborers grade yard and plant shrubs.



**14th day:** Two carpenters and one laborer work inside; third carpenter and second laborer work outside. Inside carpenters install base moldings and folding doors on closets. Outside carpenter hangs screens. Laborers wash windows, floors and sinks and burn debris to ready house for buyer.

### Three scheduling tips by Powell

1. Schedule everything. Don't start a house until you've listed all the materials that go into it and around it—from bricks to bathroom fixtures, from appliances to plants.
2. Be realistic. Make sure you really know how long it takes to do a job. If you ask the impossible, you'll only irk your workmen and subcontractors.
3. If a house falls behind, treat it as a "stepchild." It's easier to reschedule it than to try to force it back onto the original schedule. But be sure to find out why it's off schedule and correct the error. Example: fire a subcontractor who fails to perform as promised.



## Don't waste field labor wages making anything you can buy right

Anything and everything can be made better and cheaper in a shop than it can be made on the building site; most things can be made better and cheaper in a factory than they can be made in a shop.

If you find you can make your components in the field cheaper than you can buy them shop-fabricated, don't get smug about your production economy. Get busy and find out what's wrong with your buying and who is taking too long a mark-up on your order.

If your local dealer is not set up to meet your needs efficiently and economically, shop around for another dealer. Builder Bob Schmitt of Berea builds two miles from the Cleveland city line, but he buys his trusses and wall panels from a lumber dealer in Mansfield, 38 miles away.

Successful architects and builders all know that hand labor on the site can seldom compete with machines and jigs and assembly lines.

### **Especially small builders**

The hand labor craftsmanship that gave distinction to many houses custom-built in earlier times has almost disappeared, because so few people today can afford to pay for it at today's wages. Judges in the AIA-LIFE-HOUSE & HOME design competition deplored the poor quality of the site-labor products in this year's entries, but they were unanimous in praising the precision and fine quality of the factory products used.

Many smart builders like Clayton Powell of Savannah, Micky Norman of Houston and Bill Underwood of Jackson, Miss, now prefer to be known as "home assemblers." Just about the only builders who still stick to on-site fabrication are self-employed carpenters who would rather keep busy doing the work themselves than pay a factory to do it for them. If they really knew their costs many of these self-employed carpenters would find they are throwing in their own time for less than \$2 an hour. **So . . .**

*Said Builder Ernie Zerble ex-head of the Small Builders' Committee of NAHB: "We all want to build with parts instead of pieces. That is even more important for a small builder than a big one, for it is the only way a small builder can cash in on mass production economy."*

*Says Builder Harvey Furgatch of San Diego: "The only good reason for making anything you can buy without a too long mark-up is to avoid production delays if you can't trust your supplier to deliver on time."*

*Says Builder Bob Fox of Plymouth Meeting, Pa: "Even if you can save a few pennies by making things on the job, those pennies can cost you dollars in added overhead and supervision and added time needed to get the house finished."*

*Says famed Architect Philip Will, vice president of the American Institute of Architects: "We architects now practice 'catalog architecture'. Our detail consists of a catalog number. This is a new trend which will inevitably continue and increase."*



### Buy your trusses



Buy whatever type of truss you can buy cheapest in your area—glue-nailed, grip plate, split ring, gang nailed, or all-nailed (if the all-nailed truss takes advantage of the added strength of threaded nails). All are good.

Few builders have anywhere near enough truss volume to keep a truss jig busy or to develop an efficient truss-assembly crew. Few builders have enough volume to justify buying their own grip plate press or maintain controlled temperature while glue-nailed trusses set. A lumber dealer can make trusses so fast on a jig that he can pay half his assembly labor cost out of what he can save buying short lengths from the mill for the web members.



### Buy your wall panels

Your lumber dealer can save more than the cost of making them for you by buying the lumber pre-cut to short lengths (4' and 7'6") \$20 to \$30 mbf cheaper.



### Buy package fireplaces

*Says Builder Andy Place:* "I can buy and install a package fireplace and flue complete with marble surround for \$350 that would cost me \$700 to lay up with local labor. It looks just like any good conventionally built fireplace, and it needs no special foundation. (We also use a package chimney for our furnace and water heater even in the most expensive models.)"



### Buy your gable ends

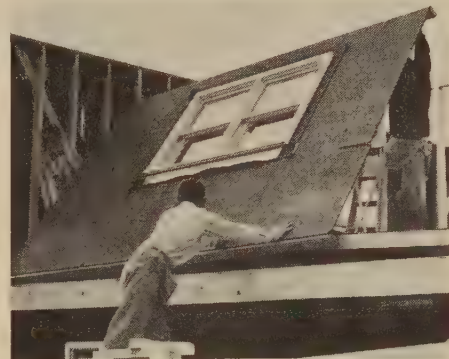
They are the most expensive part of the exterior wall to build in place. Whoever makes your trusses can make them in the same jig (using nothing heavier than 2x4 members). Have him apply the sheathing and siding too.

### Buy your cabinets

This is not quite such a clear case, because shipping factory-made cabinets involves shipping a lot of air. But Bill Levitt in New Jersey finds he can buy better cabinets cheaper from Pittsburgh, and Bill Underwood in Alabama finds he can get better cabinets cheaper from Salem, Ohio.

Factory-made cabinets are almost always better, because factory finishes can be better controlled and factory tolerances are almost always more exact, so their doors and drawers fit better and work easier. Also, factory-made cabinets are usually better planned with good special features like metal bread drawers that few locally fabricated cabinets offer.

Some builders like Andy Place buy only the cabinet fronts, letting the drywall behind do double duty as cabinet back and just nail their shelves to the studs. This is cheaper, but not necessarily as good. The drywall will not take as much beating as a steel, wood, or composition board back, and home-made shelves are more apt to warp.



### Buy your windows pre-glazed

Fifteen years ago this was a hot question, but now everyone realizes that doing anything else wastes so much time that no sensible architect or builder would dream of assembling windows at the site.

### Buy your closet fronts complete

See page 128.



### Buy your doors pre-hung with the hardware installed

It takes a good carpenter at least an hour and often two or three hours to hang a door and drill and set the hardware. That will cost you \$5 to \$15 extra for direct labor if you pay your carpenter \$3.30 per hour and figure hopefully that two-thirds of his time is productive. You can buy the same door pre-hung with all the hardware set for less than \$5 extra—with a further saving on faster construction and more dependable scheduling.

Some door manufacturers like Ready Hung Door ship pre-hung from the factory; others like Curtis and Carr, Adams & Collier ask their jobbers or local warehouses to pre-hang their doors locally to save freight.



## Plan on a 4' module to fit the parts you buy

Many builders waste half the money they try to save building with parts instead of pieces. They waste either by buying parts that are not dimensioned to fit together without costly on-site piecing; or else they dimension the house so the parts they buy won't fit its rooms.

For example, many builders dimension their rooms to fit the dimension lumber of their floor and ceiling joists so the rooms end up 11' 4" or 13' 4"—a dimension that will not work with anything else they buy. Seven years ago the NAHB asked the lumber manufacturers to coordinate lumber lengths to fit the other components, but so far the lumber manufacturers have taken no such action. Fortunately this is much less important now, for slabs and trusses do away with joists completely.

Almost all other components can be bought in sizes that will work with the 4' x 8' module. This module fits either the 16" or 24" rhythm of stud spacing; so does bat insulation. You can buy all kinds of sheathing and some kinds of siding (plywood, hardwood, sheet asbestos) to fit 4' x 8' exactly. Wall panels like LuReCo come in 4' widths; trusses are easiest to buy in spans that are even 2' modules. Now at last you can buy windows to fit the stud rhythm, and one enterprising window maker offers structural windows 4' wide incorporating a 1x4 stud on either side.

Inside the house floor-to-ceiling closet fronts can be bought in 2' modules; most storage walls come 2' x 4'; most kitchen cabinet and appliance widths conform to the 2' module and the 1' half module jointly recommended by NEMA and NAHB; acoustical ceilings come in 1' and 2' squares; and roll floor covering is made in even yard widths (mostly 12'). Outside the bathroom almost the only components that still do not fit an even-foot module (usually a 4' module) are doors and tiles.

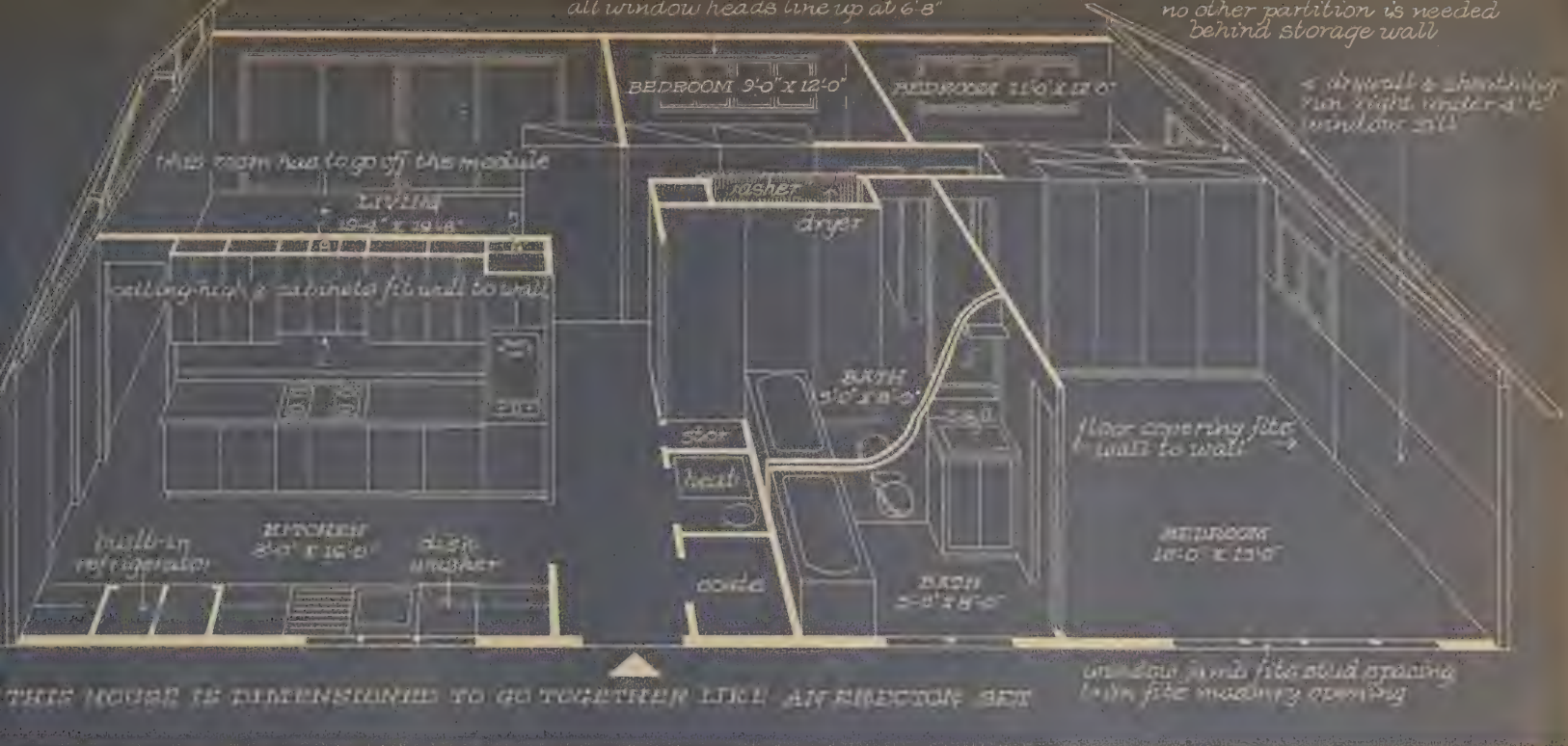
The bathroom is still a special case because 2' is too narrow a wall space to allow for a fixture and 3' is too wide, so bathrooms are standardizing on a 32" module instead. Across the bath two 32" modules allow 60" for the standard tub plus 4" to make the wet wall thicker.

"Coordination is the whole idea behind our LuReCo panels and the reason for their success," says *Clarence Thompson*, Chairman of the Lumber Dealers' Research Council.

"Once the local builders accept coordinated dimensions they can get coordinated components from many different sources," says *Neil Connor*, AIA, Chief Architect, FHA.

"Components can be assembled a lot cheaper at the site if their sizes are coordinated," says *Theodore Pratt*, ex-Chairman of the NAHB Research Institute.





So if you want the full saving of building with parts instead of pieces, buy all your parts in sizes coordinated with the 4' module and ask your architect to plan on the same module.

That means, among other things:

*Make the walls 8' high, with a flat ceiling height of 8' plus a tolerance.*

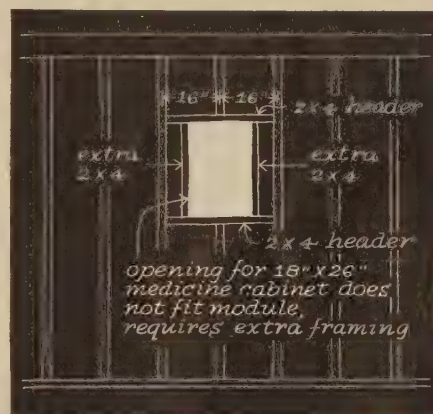
*Buy your studs precut to 7' 4" (for panels) or 7' 6" (for tilt-up).*

*Dimension the house itself on a 4' module inside measurement.*

*Dimension as many rooms as possible (except the bath) on a 4' module and its even-foot fraction (biggest saving will come from hiding half your drywall joints behind partitions—see page 100).*

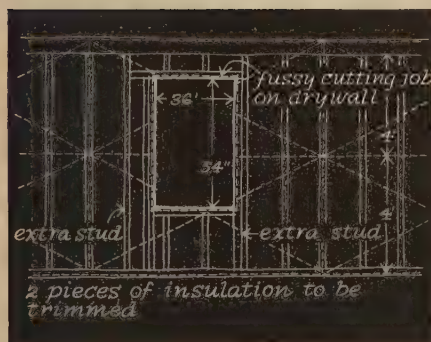
*Determine your roof overhang to take your roof sheathing without cutting (but never less than 2' with a low pitched roof).*

*And then build to much closer tolerances. With tilt-up or panelised walls there is no reason for not trying to match the 1/4" in 40' tolerance to which the prefabricators work.*



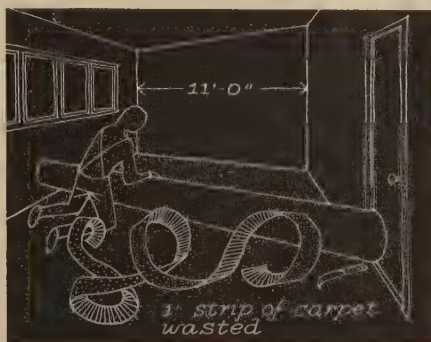
#### Don't waste on cabinet sizes:

Framing a too small medicine cabinet into wet walls (usually non-bearing) costs almost enough extra to buy a big enough medicine cabinet. The easiest (thus the most economical) size to frame would just fit between studs 32" on center, with a 32" wide mirror. Height should be 24".



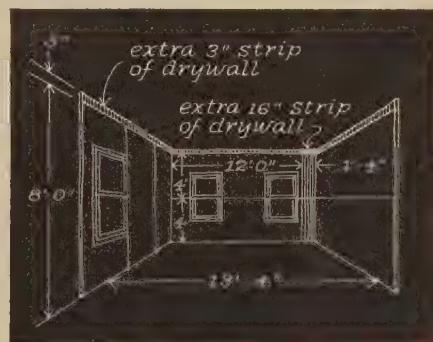
#### Don't waste around a window:

For example, a 36" x 54" window won't fit. It needs an extra stud and extra cripples; it means cutting one 8" x 90" strip and two shorter strips 4" wide. It means notching both drywall and sheathing under the window. It wastes more sheathing and drywall by a bad cut above.



#### Don't waste flooring:

Too often builders size rooms to use the full length of 12' or 14' joists. That gives them an odd dimension of 11' 4" or 13' 4" that won't fit carpets or any other component. Maximum economy with better floor coverings comes when one dimension is 12'; second best size is 9'.



#### Don't waste drywall:

If your ceiling is more than 8' high you must stretch 8' drywall with an extra slice or cut a piece off 10' drywall. If your room is 13' 4" wide your 12' drywall will need a 16" insert at one end. You get maximum drywall savings if you dimension your room to fit the drywall.



# Plan bigger if you want to build cheaper

Everybody wants more space. From coast to coast the best sellers are houses that offer more space for the money.

Space is the cheapest thing you can add to a house. Builder Bob Schmitt of Berea adds space for only \$3.37 per sq ft including 25% for overhead and profit (*see next page*).

## So don't rob Peter to pay Paul

Don't sacrifice the space people want in order to save money for the labor-saving appliances they want.

Space is a bargain, and so are appliances: they cost much less to install while the house is being built, and FHA lets you sell a whole new \$14,000 house complete with all the appliances for only a little bigger down payment and only a little bigger monthly payment than the appliances alone would cost a home owner to add to an existing house on short term credit.

So double the sales appeal of your house by offering a bargain in better space plus a bargain in appliances.

Under FHA's new credit directive, your prospects need no more income to buy the house fully equipped than they need to buy the space alone. FHA Commissioner Norman Mason believes home buyers should be able to buy the house complete.

Here are the words of his directive:



MASON

"No otherwise acceptable credit application for a house costing over \$12,000 should be turned down just because of the inclusion of a complete kitchen. Long experience has shown that where appliances are not included in the house and financed through the mortgage the home buyer is likely to go right out and buy them on short term credit at a much higher monthly payment. So actually he is a better credit risk if appliances are sold as part of the house despite the fact that this requires slightly higher monthly payments on the mortgage."

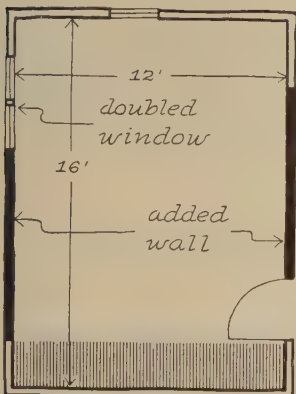
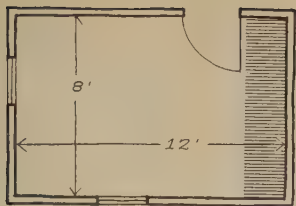
That directive is the most important advance in FHA policy since 1937; not enough builders take advantage of it.

## The smaller the house the more it costs per sq ft

So says Rudard Jones, director of the Small Homes Council. "That's one big reason why builders find it so hard to build good new houses for low income families. Making the house smaller takes value and comfort out of the house faster than it can take dollars out of the price.

"All your costs per sq ft come down as the floor area goes up—the perimeter wall cost, the foundation wall cost, the door and





window cost, the partition cost, the wiring cost, the plumbing cost. Even the slab and the roof costs come down, for once the concrete mixer is there it doesn't take much longer to pour a bigger slab, and once the roofers are up on the roof it won't take them much longer to lay a bigger roof."

For example:

When you double the size of an 8' x 12' room to 12' x 16', you add only 40% to its perimeter and you add much less than 40% to its perimeter costs, because you don't have to add any more corners (which are expensive), or any more doors (which cost much more than blank wall), or any more window openings (you just make the same window opening bigger).

*Says the Small Homes Council: "Good livability requires at least 170 sq ft for the master bedroom.*

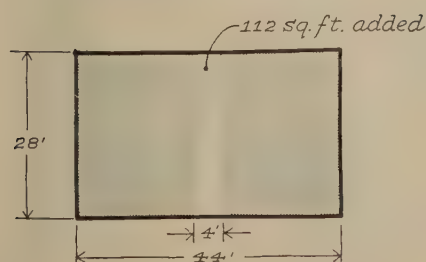
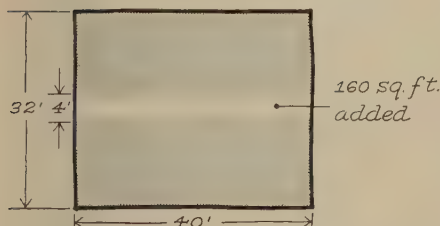
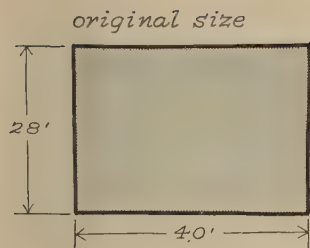
And when you more than double the size of a small house by making it 32' x 40' instead of 24' x 28', thereby adding 688 sq ft to the original 672, here is how your costs per sq ft come down:

1. Doubling the house adds only 42% to the perimeter, only 42% to the foundation wall, only 41% to the gutter, and probably less than 40% to the interior partitions.
2. Doubling the house adds only three or four more doors, only two or three more window openings.
3. Doubling the house should add less than 50% to the heating cost, because heat loss and duct cost vary mostly with perimeter and because a bigger furnace costs less per Btu to install.
4. Doubling the house should add much less than 50% to the wiring bill even if the number of outlets is doubled, for the runs would be shorter and any-

how most of the wiring cost is for the kitchen-utility area.

5. Doubling the house should add much less than 50% to the plumbing cost, for a second bath could use the same service line, the same vent, and the same sewer line, and because the rough plumbing for two baths back to back costs only 20% more (at APSCO's published price) than the rough plumbing for a single bath.

Furthermore, doubling the size of the house makes it much easier to save money by sizing the rooms to fit the components you buy. A 12' x 12' room is almost sure to cost less than a room 9'8" x 11'4".



### Adding depth costs less than adding length

Here are Builder Bob Schmitt's comparative costs for making a 28' x 40' house 4' deep or 4' longer. Including 25% for overhead and profit, it costs him \$3.37 per sq ft to make the house 4' deeper; \$4.22 a sq ft to make it 4' longer.

Either way he figures his floor, ceiling, and roof costs at the same \$1.67 a sq ft—22¢ for roofing, paper, and sheathing, 17¢ for ceiling drywall, 67¢ for the slab, 22¢ for the flooring, 5¢ for ceiling insulation, plus 25% for overhead and profit.

Either way he estimates the same 40¢ a sq ft for partitions, wiring, heating, etc.

Either way he adds 8' of perimeter, but perimeter along the eaves costs more per foot for overhang and spouting—\$25.44 vs \$19.05. So making the house 4' longer adds 112 sq ft for an added perimeter cost of \$203.90, which is \$1.73 a sq ft; making the house 4' deeper adds 160 sq ft for an added perimeter cost of \$152.40, which is only 95¢ a sq ft.

Making the house longer takes two more 28' trusses at an added erected cost of

\$48; making the house deeper takes the same number of trusses, but the trusses and gable ends are all 4' longer and cost \$56.43 more. So the truss and gable ends cost 35¢ a sq ft for the 160 sq ft added by making the house deeper; they cost 42¢ a sq ft for the 112 sq ft added by making the house deeper.

Here is the comparison in brief:

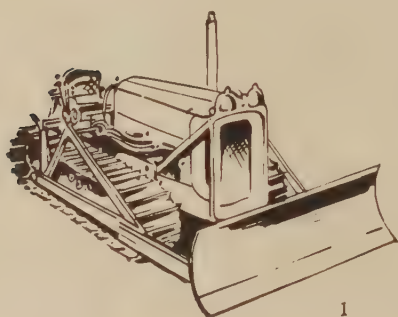
	Longer Deeper	
Direct costs of more floor, ceiling, roof	\$1.67	\$1.67
Share of added wiring, heating, partition costs	.40	.40
Share of added perimeter cost	1.73	.95
Share of added truss and gable cost	.42	.35
	\$4.22	\$3.37





# Don't use muscle power where you can use horsepower

## Grade your site with



1

Just because houses are assembled out in the open instead of being assembled in an assembly plant is no good reason for doing things by hand that could be done ten times easier with power equipment.

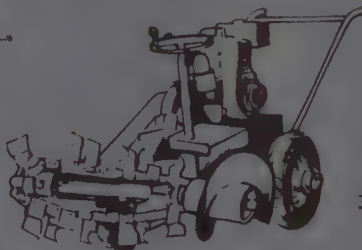
Too many subs still do things the hard way for fear lest cutting their costs would cut their bill and so cut their profits. But don't let them waste their time and your money. Insist that they buy and use all the best new power equipment. If necessary, buy the tools yourself and lend them to your subs until they learn to want them. That's what Bill Levitt did for some of his subs, and it saved him thousands of dollars.

Anything and everything from grading the site and digging the trenches to smoothing concrete and driving nails can be done cheaper and better with modern tools. So . . .

## Dig your foundations with



2



3



4

Emil Weiss

## Move your materials with



5



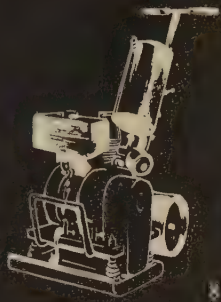
6



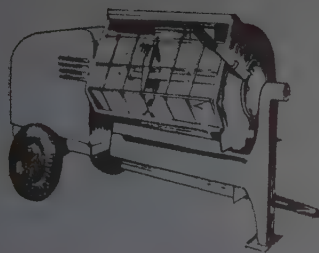
7



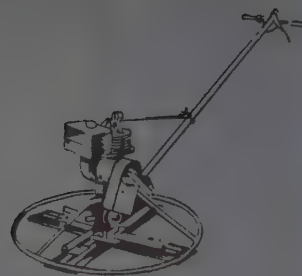
**Tamp your soil base with**



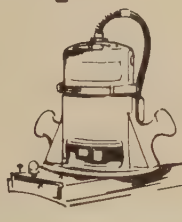
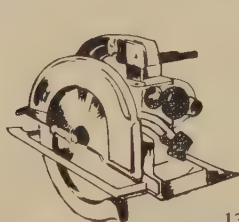
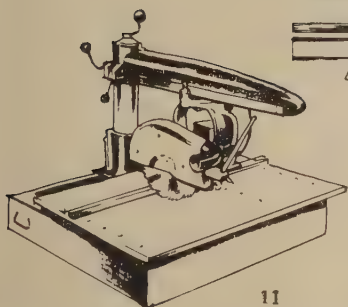
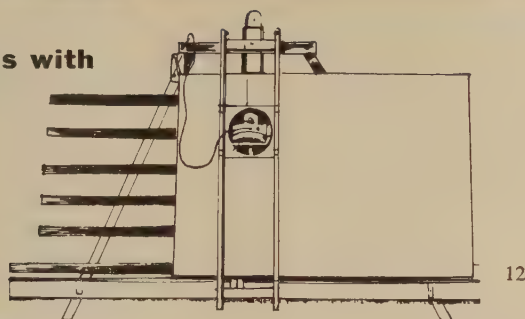
**Mix your concrete in . . .**



**and finish it with**



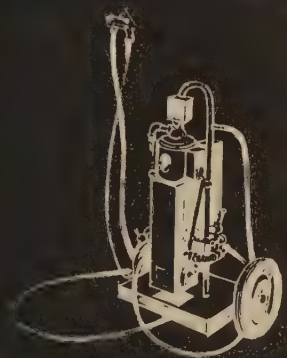
**Cut your materials with**



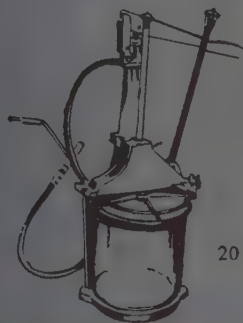
**Drive fasteners with**



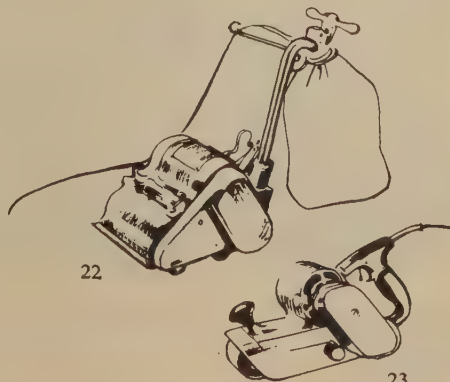
**Spray your paint with**



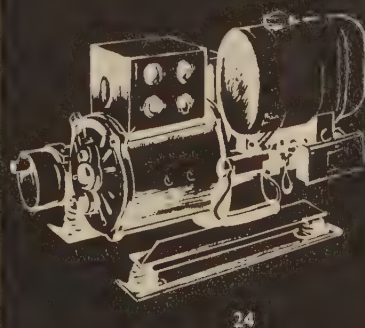
**Calk and tape your drywall with**



**Finish woodwork with**



**Carry your power  
to the job with**



1. BULLDOZER
2. POSTHOLE AUGER
3. TRENCHER
4. BACK-HO
5. HIGH-LIFT SHOVEL
6. FORKLIFT
7. TWO-STORY HOIST
8. POWER COMPACTOR
9. POWER MIXER
10. POWER TROWEL
11. RADIAL SAW
12. PANEL SAW
13. CIRCULAR HAND SAW
14. ROUTER
15. STAPLER
16. STUD DRIVER
17. POWER SCREWDRIVER
18. POWER NAILER
19. PAINT SPRAY
20. BULK CALKING GUN
21. TAPING MACHINE
22. FLOOR SANDER
23. HAND SANDER
24. PORTABLE GENERATOR

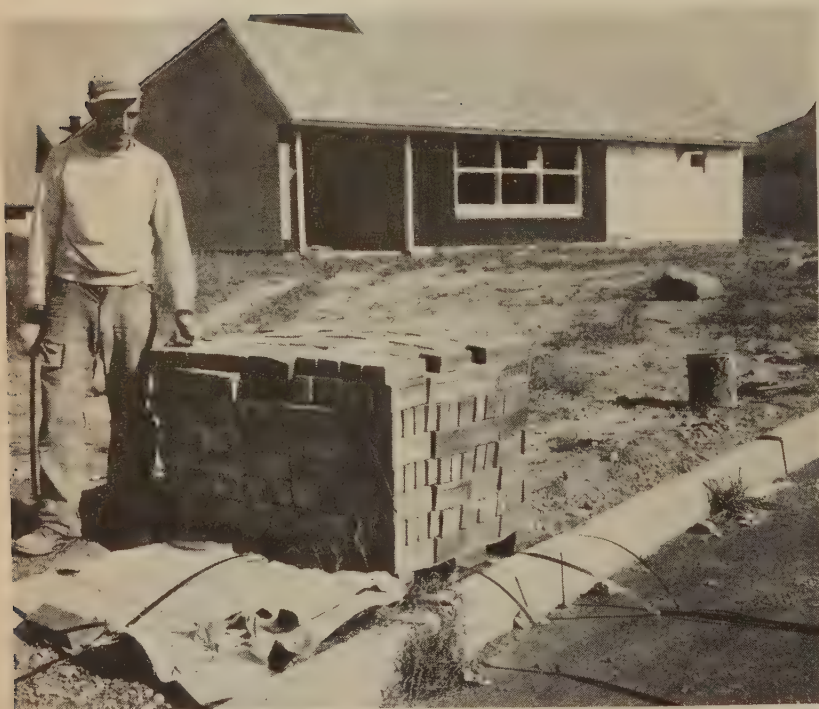
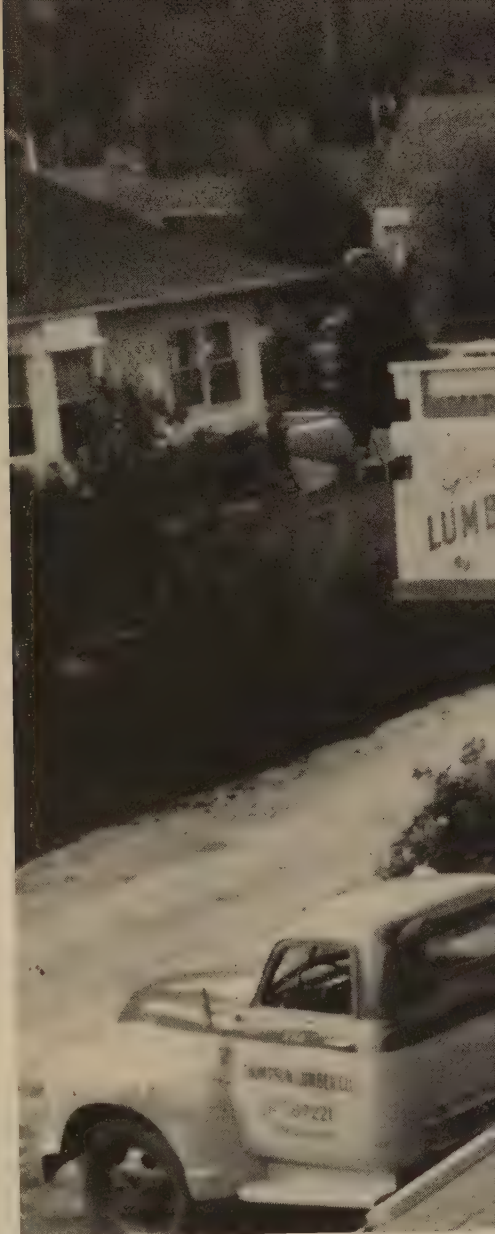


Advice No. 6

## Plan to save time and money moving materials

A good retail dealer can afford much better materials handling equipment than most builders, can earn much of his markup by scheduling deliveries just when the builder needs them and making deliveries just where the builder wants them. So ask your supplier to:

**Unload your roofing on the roof**



Jack Rosen

**Unload your bricks and blocks  
where your masons will use them**

Don't pay your helpers \$3.00 an hour to carry them from the street by hand.



**Unload your panels along the walls**





Abby Photography

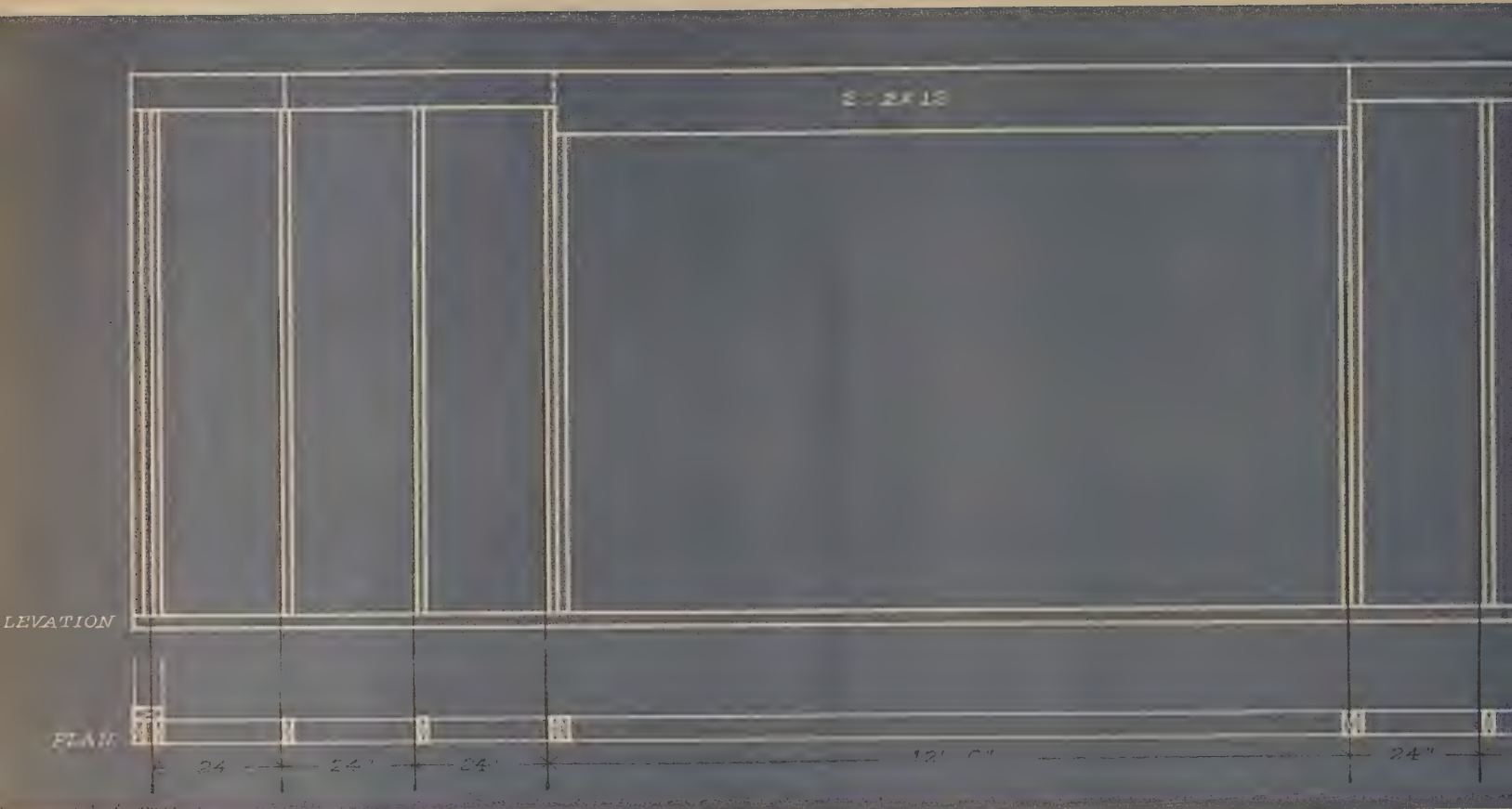
**Unload your trusses onto the walls**



Henry M Barr

**Unload your flooring, your drywall,  
your appliances, and your plumbing  
fixtures inside the house**





Advice No. 7

## Here is the best way to frame a loadbearing outside wall

### 1. Space your studs 24" o.c.

All model codes approve this wider spacing, and there is no excuse for any local code that requires studs 16" o.c. for one-story houses. Says Professor Albert George Henry Dietz of MIT: "Practically all small houses built today use too many studs. You can't say they are over-engineered, because they aren't engineered at all. They are just over-built."

Spacing your studs 24" o.c. will cut your stud lumber cost and your stud erection cost nearly  $\frac{1}{3}$ . With fewer studs you will use fewer nails, so you will cut your labor cost for erecting drywall, insulation, sheathing and siding  $\frac{1}{3}$ , and you will also save the cost of spotting too many nail heads to finish your dry wall.

### 2. Don't waste cripples over windows

They are worse than useless under a double 2x6 header. If they performed any function at all they would transfer some of the roof load to the window. Your drywall needs no vertical backing there, for even the thinnest board would span the 6" or 8" between window and header.

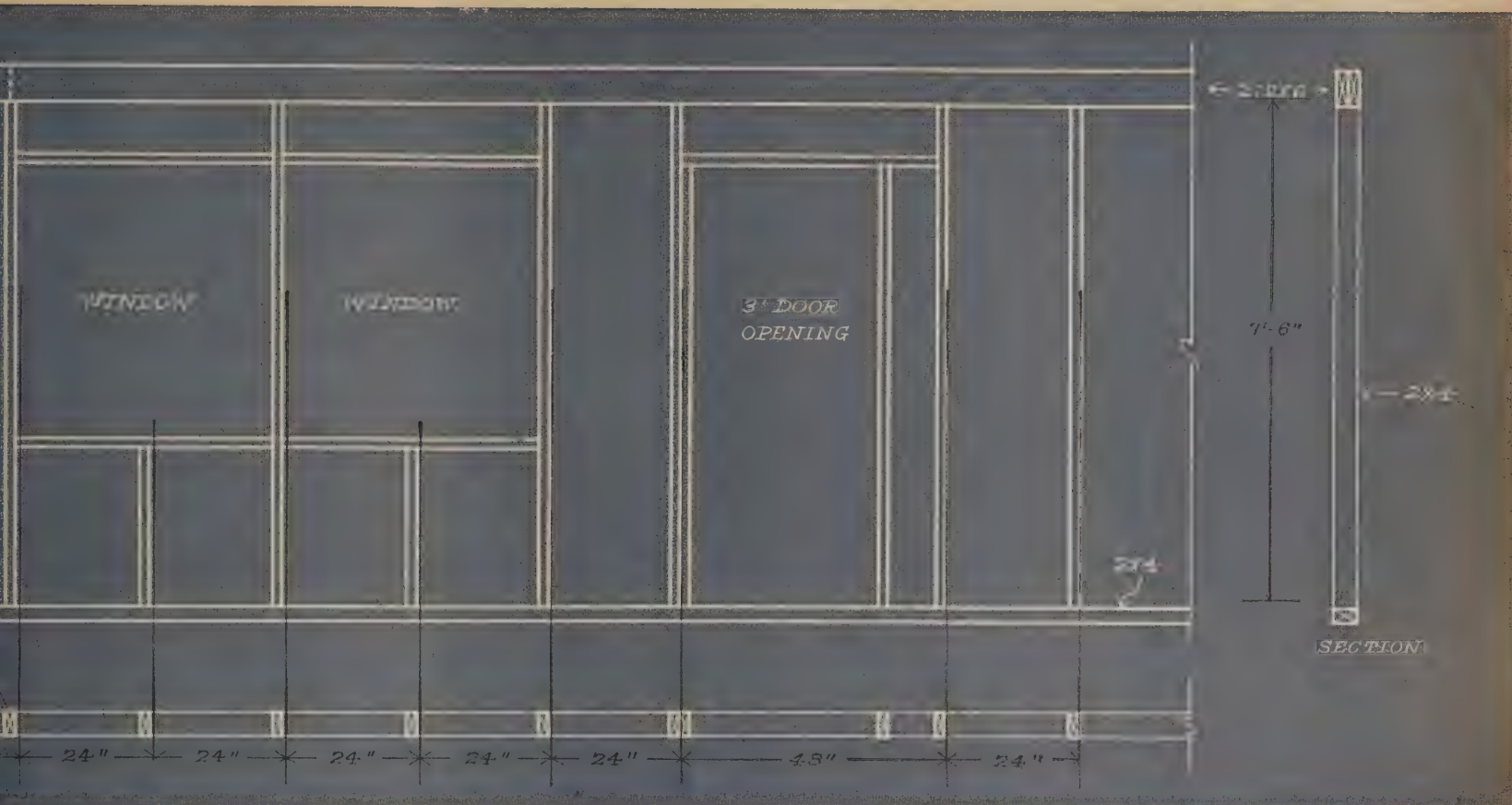


### 3. Use a double 2x6 header not a double 2x4 plate

The new FHA standards approve the double 2x6 header to span any opening up to 5'6" in one-story houses. The double 2x6 ends any need of individual headers over ordinary windows and any need of jack studs to support them. With a double 2x6 header you can buy all your outside wall studs the same length—7'4" for panelized construction or 7'6" for tilt up.

The double 2x6 header will use 27 more board feet of lumber in a 40' bearing wall than a double 2x4 plate, but you will save the extra cost (less than \$3) at least twice over in lumber alone for shorter studs, no jack studs, and no individual headers. And you will save it many times over in less labor wasted and less time consumed.





#### 4. For a wide opening in a bearing wall notch a deeper header for the opening

Notch a double 2x10 4' wider than the opening for 10', a double 2x12 for 12'. Notch one on the right, the other on the left, to get continuity on both sides with the double 2x6.

#### OR 5. Continue the double 2x6

... and reinforce it with a second double 2x6 across the opening, tying the two together with a continuous plywood web.

*Either way you will need a jack stud on either side of the wide opening to carry the load. OR ...*

#### 6. Use a steel Z-brace

It will support a deep header without notches. Builder Clayton Powell has found this the cheapest and best way.

#### 7. Buy windows sized to fit your stud pacing

Buy recessed windows 22¼", 30¼", or 46¼" wide to fit between studs 24", 32", or 48" oc (or 44½" for LuReCo panels) with exterior trim that will bring the overall width out to the center of the studs and fit the other facing components. Buy front nailing windows 24", 32", and 48" wide. These widths are now available from several manufacturers as a result of Round Tables jointly sponsored by HOUSE & HOME and the Research Institute of NAHB.

#### 8. Put a single stud between multiple windows

You need no more for intermediate support of a double 2x6 header, and the single stud will give you a narrow mullion.

#### 9. Group your windows

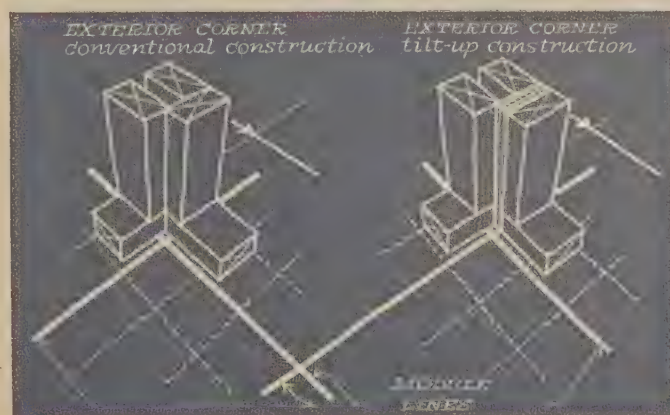
Each added opening in your wall runs up your costs; big windows cost much less per sq ft than small, and a narrow

wall section between windows costs much more per sq ft than a larger unbroken area.

This is one of the first lessons Frank Lloyd Wright began teaching sixty years ago. Some of his big houses have 50 windows, but only half a dozen window openings.

#### 10. Buy fixed glass for part of your windows

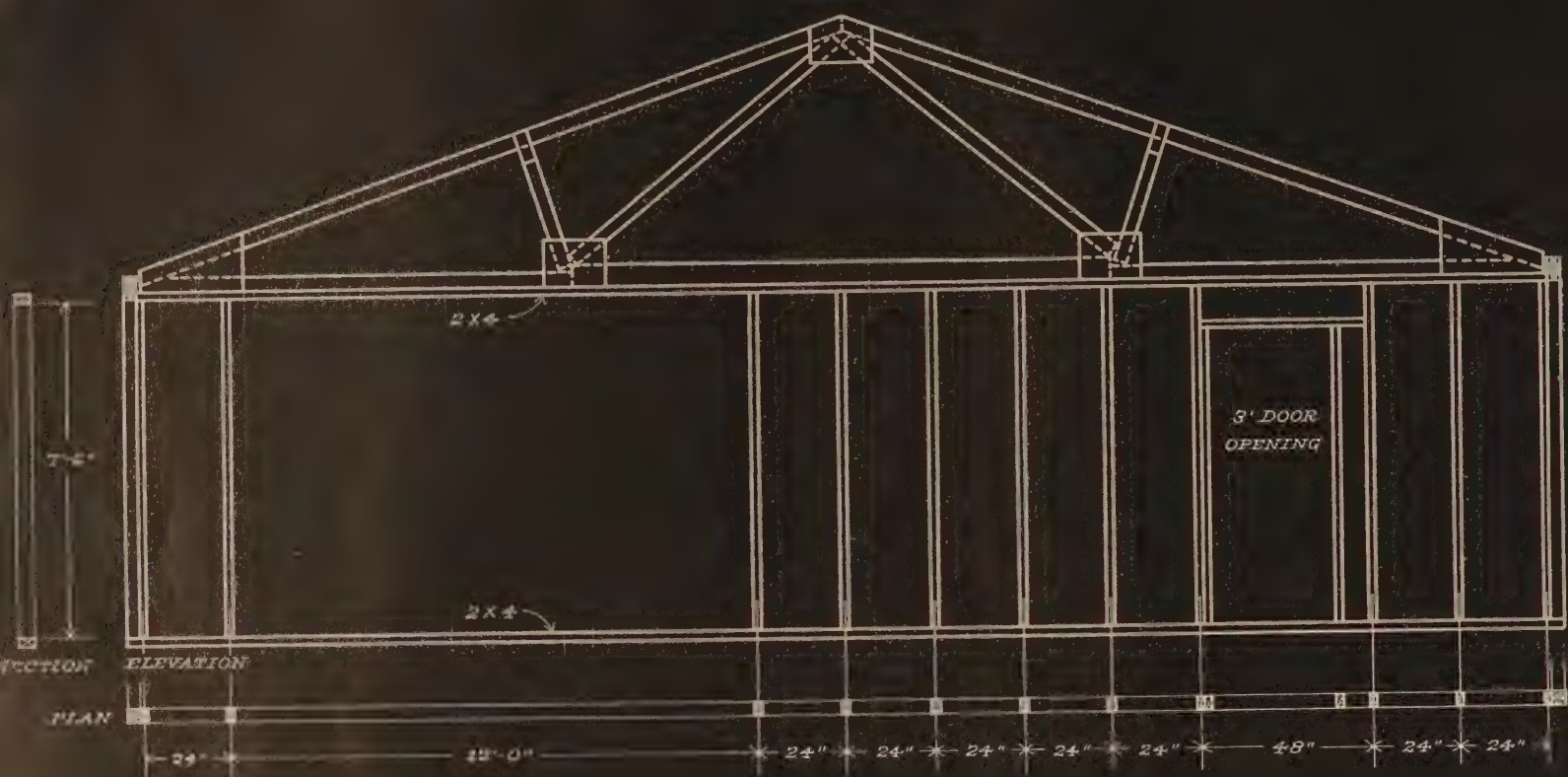
Says Ralph Johnson, research director of NAHB: "Fixed glass can save you as much as \$100 a house. Most builders provide more openable windows than are needed for good ventilation."



#### 11. Frame your corners outside the 4' module

This will make extra work putting narrow pieces of sheathing and/or siding around the corner posts, but it will save money everywhere else by making all your wall components inside and out—drywall, bat insulation, sheathing and siding—conform to the rhythm of your studs.





## Here is how to frame a non-bearing gable end

Advice No. 8

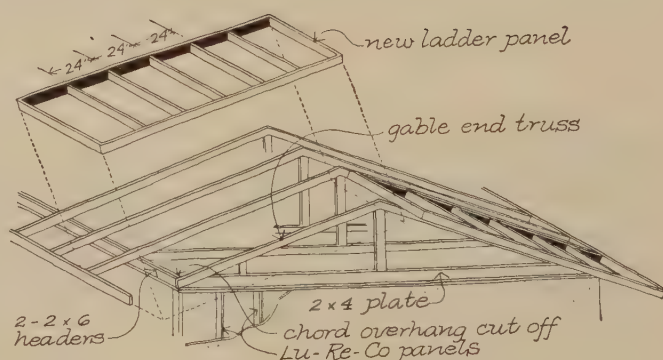
### 1. Use a continuous single 2x4 plate

Use it the same way you use a double 2x6 header in a bearing wall. It carries no load, so the single 2x4 will span any opening—even a 12' window—without intermediate support. So it costs a good deal less to put a sliding glass wall or a garage door in the gable end. All the studs can be the same length (7'-4" for panels, 7'-6" for tilt-up, i e, the same as in the load-bearing wall) and extra studs will be needed only for door bucks.

### 2. Drop your gable end truss down on the plate

This will drop it 4" below the other trusses, since these are supported on double 2x6 headers in the bearing walls. It will also drop it 4" below the rafters if you stick to conventional framing.

*This information was developed from "Gable Framing Using Ladder Panels on Roof Trusses." Instruction sheet #11, price \$0.50, available from the Small Homes Council, Mumford House, University of Illinois, Urbana.*



### 3. Rest a 4' wide ladder on the gable end

This ladder will support about a 2' overhang. It can be made of 2x4s on the same 4' jig as the wall panels. Space the cross bars 2' apart as nailers for the roof sheathing.

### 4. Ventilate your attic through the ladder

"This will save you money," says Rudard Jones, Director of the Small Homes Council, which worked out the system. It will also provide good ventilation without letting in any rain or snow for the only opening will be right under the eaves (where up-drafts are less) and it will face straight down. Leave most of underside of the eave open behind a screen.





Advice No. 9

## Design your walls for fewer layers

A few builders still put up their walls in as many as 16 separate operations for 16 separate layers. You can save many field labor dollars by designing your walls to combine or eliminate half these layers and so get a finished wall in 6 operations instead of 16. So . . .

### 1. Apply your paint in one outside layer and one inside layer

(See page 124).

### 2. Use drywall instead of lath and plaster

Drywall costs less almost everywhere now. It is actually better if it is applied right, because it is more uniform and cracks less. More important, it lets you install all your dry plaster in one day and finish it in two more, whereas wet plaster takes days or sometimes weeks to dry (depending on the weather) before it is ready for paint or paper.

"I got rid of wet plaster in all the houses I designed because of cracking," says Bill Scheick—speaking as an architect and not as Executive Director of BRAB. "I don't know how you can expect to get all that water out without having trouble as the studs first swell with the moisture they pick up and then shrink again."

Says Architect Morgan Yost, Chairman of the AIA Home Building Committee: "We specify drywall because we get better quality control with no moisture problem and no materials ruined by moisture. Also if something isn't right we can remove and replace drywall much easier."

The one valid objection to drywall is nail popping. This can be overcome by getting dryer studs, by using shorter nails with a better grip, and by glue-nailing your drywall to the studs. (See page 119.)

### 3. Combine your vapor barrier with your drywall

Foil-backed gypsum board costs only 2¢ extra per sq ft or \$18 for 900 sq ft on walls of a 32' x 40' house, or, alternatively . . .

### 4. Combine your vapor barrier with the insulation

Most insulation bats come with an approved vapor barrier on the inner face—either aluminum foil or asphalt. Foil-faced bats with 2" of insulation cost a builder about 6.35¢ per sq ft; asphalt-faced about 5.15¢ per sq ft. Neither combination will work unless extra care is taken to staple the edges tight to the studs.

### 5. Combine sheathing and insulation

For mild climates like San Francisco or Portland, 25/32" insulation board sheathing is all you need to keep the house warm in winter and cool in summer economically.

### 6. Don't waste building paper over solid sheathing or under panel siding

Only function of building paper is to stop wind and rain coming through a leaky, many-piece wall.

### 7. Don't waste diagonal bracing under sheathing or under plywood siding, either of which gives all the racking strength you need

### 8. Combine your sheathing and siding

Solid plywood panels (like Texture 1-11) or hardboard panels (as on last year's NAHB Research House) can do triple duty as sheathing, siding, and bracing. In houses with diagonal bracing and building paper, separate sheathing is necessary only for impact resistance behind asphalt cement shingles or panels or behind thin beveled wood siding.

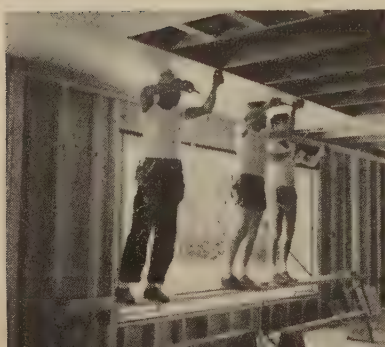




LIFE: John Zimmerman

Advice No. 10

## Plan to do nothing on a ladder your men could do on the ground



For example: preassemble your gable ends and hoist them into place. Pre-paint your siding all but the last coat before you put it on the wall. Pre-nail your shakes to 16' nailing strips before lifting them to the roof. And give your men a platform to stand on when they work on the ceiling.



## There are just two good ways to frame your walls 1) Panels, and 2) Tip Up

Panels use more lumber because of the double stud where two panels meet.\* (This can take up to 36 extra studs for a 32' x 40' house.) But panels are usually cheaper because:

1. Panels can be made in time when your framing carpenters might otherwise be idle, or they can be bought cheaper from a lumber dealer (*see page 98*).
2. Panels are made in a jig at bench level; but tip-up walls must be nailed together on the floor, where it is harder to work.
3. Doors and windows are easily shop-assembled in panels, but few carpenters like to pre-assemble them and tip up.
4. Tilting up a long wall requires more men even when wall jacks are used.
5. Panels get your house under roof a little faster.

\* The extra stud requires no more lumber if you can trust your carpenters and your dry wall crews to drive a nail into a 1 x 4. Panels with 1 x 4 end studs are quite strong enough, according to Ray Harrell, executive vice president of the Lumber Dealers Research Council.

Lionel Freedman



### If you use panels:

1. Put the sheathing, doors, and windows on in the jig.
2. Use standard 4' and 8' widths (and sometimes 2'). These widths can be used in almost any wall, so they can be mass produced with lumber bought from the mill pre-cut to size at savings up to \$30 mbf. Panels less than 4' wide increase costs because you have to cut insulation board or plywood and you have more field joints. Panels more than 8' wide reduce flexibility, increase weight and handling problems and therefore are apt to be left more incomplete; ie, without windows or siding.
3. For vertical siding, use two 2x4 horizontal nailers instead of the center stud. (*See p 108.*)
4. Never anchor your partitions to the outside wall. Each will move independently—sometimes because the outside wall is a different material with a different rate of expansion, sometimes because the outside wall shrinks and expands more due to more exposure to changing temperatures and humidities, sometimes because the outside wall rests on the foundation, the partitions on a free-floating slab. So if you nail the partitions to the wall you are sure to cause unsightly cracks in the partition. Just fasten the partition top and bottom to ceiling and floor. Nail it into a slab with hardened steel nails.

5. Have your panels delivered on the slab to reduce your handling costs.



6. Panelize your partitions too. Too many builders overlook the savings they could get by organizing their interior partitions just as they do their inside walls. Interior partitions are apt to require odd lengths, but they take a standard 8' height. Take advantage of that standard height to make 4' wide panels in the same jig as your outside walls, laying them horizontally so two panels make an 8' partition. Vary their length to fit their wall requirement, and jackknife them into place to eliminate shims top or bottom. Use vertical panels in standard 2' and 4' widths only for working walls like book cases and fitted closets.

### If you tilt up:

1. Buy all your materials pre-cut from a schedule and have it delivered to the site strapped and marked.
2. Give your carpenter foreman a template to nail to the plate so he won't have to measure to locate studs. Builder Earl Smith uses a steep strap painted one color for a stud, another color for a trimmer.
3. Insist that the sheathing, windows, and siding are all installed before the wall is tilted into place.
4. Use wall jacks to lift it and metal braces to hold it in place.
5. For interior partitions use 2 x 3 studs and a single top plate.





Advice No. 11

## Design for long trusses and try to save \$1000 a house

NAHB President Nels Severin says he saved \$650 a house just by switching from conventional framing to truss construction. Builder Andy Place says trusses save him at least \$800 on his 1,900 sq ft model.

Builder Bob Schmitt of Berea puts his saving much higher. Says he: "It is conservative to say that by taking the maximum advantage of the cost-saving techniques made possible with long trusses, a builder can save \$1,500 per 1,200 sq ft house over an extended group of houses. The words 'extended group' are important because economies from minimum weather exposure, minimum delays, decreased building time, smaller under-construction inventories, etc, will not be apparent on a single house."

Nine builders out of ten still frame their roofs the old fashioned way and find it hard to believe the savings other builders credit to trusses. For this misunderstanding there are three possible reasons:

**1. They may be paying too much to buy trusses outside**

Builder Bob Schmitt, with a volume of less than 100 houses a year, buys standard 28' W glue nailed 4-in-12 trusses from his lumber dealer for \$17.95; standard 32' trusses for \$19.53; standard 34' trusses for \$21.78 delivered. In Florida, where everybody uses trusses made of yellow pine, Florida Builders in St Petersburg sells 28' H brace trusses for \$16.11 and 32' trusses using all 2x6s for \$20.83. In Springfield, Ill, Fredenburg Lumber Co sells 28' nail trusses for \$16.15. In Knoxville, Martin Bartling buys 28' 3-in-12 glue-nail trusses for \$14.00. Dick Hughes in Texas charges out 24' glue-nailed trusses at \$13.60.

**2. They may not realize how cheap and easy trusses are to make and erect**

Lumber for a standard 2x6 W truss costs \$2 less than the joists and rafters it replaces (92 board feet vs 109); plywood for the gussets costs about \$2 more, so the material cost is equal. Andy Place shop fabricates his own trusses in 10 man-minutes to cut the lumber and plywood and 10 man-minutes to assemble it in a jig, at a total labor cost of about \$1. His erection time per truss is only 12 man-minutes. No builder can erect joists and rafters anywhere near that fast.





## Here are Bob Schmitt's trade secrets for maximum savings with trusses

1. Erect every other truss on the 4' module line for a sheathing nailer, but
2. Move the intermediate truss an inch or two right or left as needed to provide a nailer for interior partitions and ceiling drywall.
3. Move a truss aside 2" for the 24" disappearing stair.
4. Erect and finish your ceiling and perimeter drywall while the house is still one big room. This lets you use less and longer drywall sections, with 25% less butt joints. It lets you hide half the joints behind your partitions and cuts your taping and finishing costs in half.
5. Finish your floor as one big room, after you apply your drywall but before you erect any partitions. "This will cut your labor costs 80% for cleaning and preparing the slab and for laying the floor."

6. Frame your interior partitions on 2x3s.
7. Take advantage of your trusses to dimension your rooms to fit their components instead of fitting their joists (joist sizes almost never fit anything else). *See page 100.*
8. Take advantage of your trusses to make your houses deeper. With conventional roof framing most builders stick to a 28' depth and divide their houses into two 14' corridors to avoid paying for heavier joists and rafters. It is hard to fit an economical plan into the straitjacket of those corridors. It is hard to dimension the rooms to fit their components, and it is hard to get a really efficient mechanical layout. With a 32' or 34' depth and no fixed wall down the center an architect can plan a much more economical house.
9. Don't partition the garage off from the house until last, "so you can drive your trucks right into the house and unload your materials and equipment right on the floor."

## And here are some of Bob Schmitt's \$1500 savings

**"\$300** (average) from getting the house under cover the first day. "This lets me get the whole job finished faster and lets me schedule my crews better rain or shine and keep them busy full time without having too many houses under construction. It lets me offer steady employment and so get better crews."

**\$200** on faster drywall erection and finishing.

**\$200** on faster laying and finishing of the hardwood floor.

**\$150** on thinner interior partitions and easier erection.

**\$300** plus on plumbing, heating, and wiring, because the deeper plan permits a more economical mechanical layout.

**\$50** on a simpler slab, with no interior bearing walls that would require a thicker slab.

**\$100** on materials handling, "because I can unload the trucks inside the house."

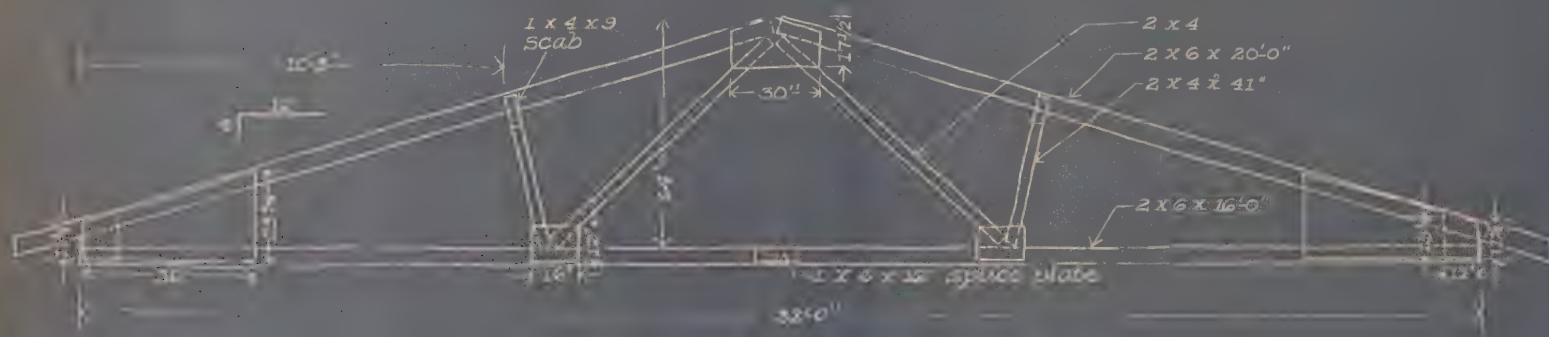
**\$200** for indirect savings due to better coordination, integration, and general efficiency.



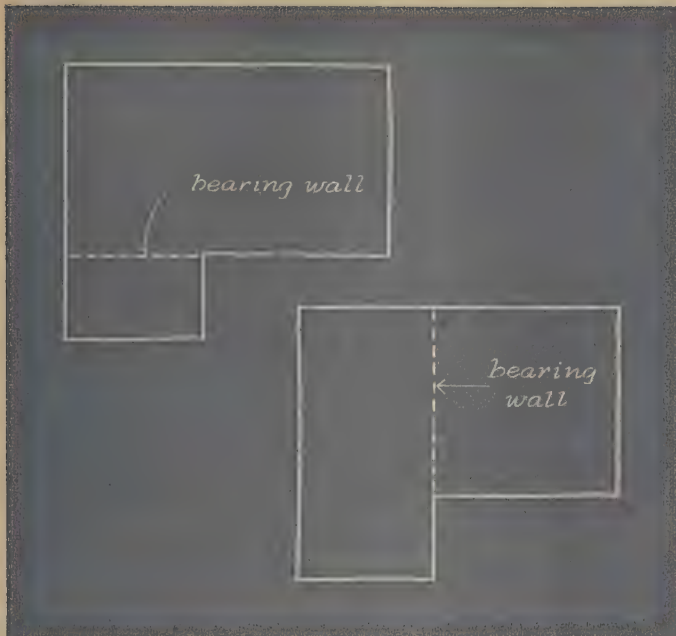


#### This is the most economical new 32' truss

It was designed for Builder Andy Place by Byron Radcliff of Michigan State College. It is all 2x4s except the center of the bottom chord. The center 10' section is designed for a 25 lb floor load to permit attic storage. In tests this truss took a 109 lb roof load before breaking, ie, twice the heaviest snow load for which trusses must be designed anywhere in this country. It uses only 73.1 board feet of lumber, 18.8 less than the 32' Small Homes Council all-2x6 W-truss (which was designed for spans up to 40') and the same amount of plywood for the gussets. It weighs only 148 lbs. Two carpenters cut and glue-nail it in 20 man minutes.





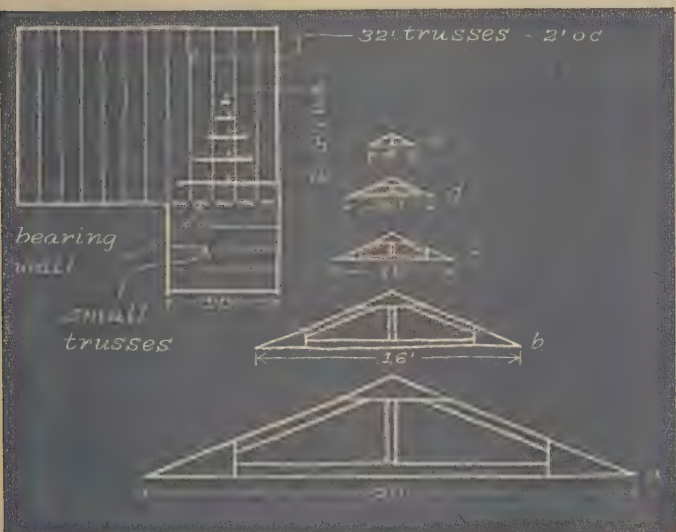


### Here is how to roof an L-shaped truss house

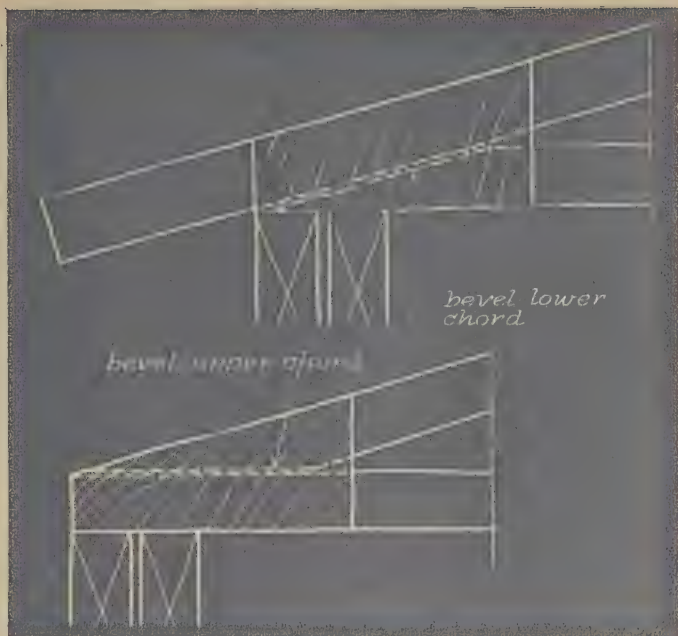
1. L-shaped plans lend themselves readily to an interior wall where the two wings meet. Sometimes this bearing wall can run front to back through the house; more often it will run side to side across the L.



2. If you cannot get a bearing wall where you want it, span the narrower wing with a steel beam above the ceiling line and support a bobtail truss on a joist hanger. A glue-nailed girder might be cheaper, if carefully engineered.



3. Mask the intersection by setting a preassembled saddle on the sheathing. No matter what the roof pitch, you can frame this on 2x4 trusses each 4' shorter than the next, set 2' oc. The saddle will look better if it rests on the side of the wider and therefore higher of the intersecting roofs.



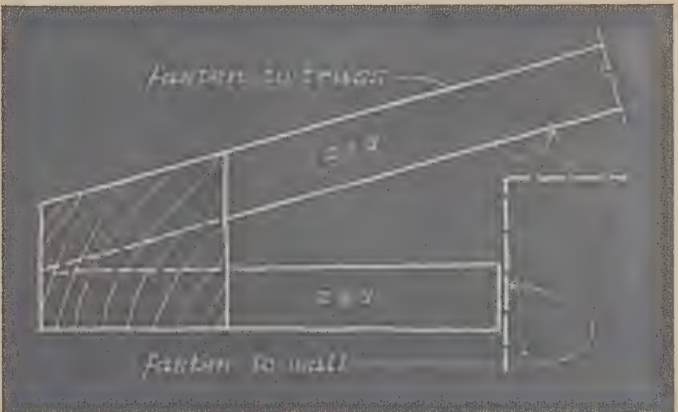
### Here is how to keep your roofline low

Mitre either the top or the bottom chord at the edge of your truss. Otherwise your truss will lift your roof 4" or 6" higher than necessary. (The Radcliff truss shown on the opposite page is mitred).



### Here is what to do with a small offset

Don't break the roofline. Use the same truss, but support it as shown.



### Here is the best way to add a wide overhang

Preassemble a glue-nailed lookout. This will save the extra cost of long top chords and keep the trusses shorter and therefore easier to handle. Except on very low pitched roofs (2-in-12 or less) this is cheaper than letting the soffit follow the rake because the trusses are easier to handle without the overhang and carpenters waste too much time on ladders finishing the wall under the eaves.



# Engineer to use less and better nails

Advice No. 12

It takes close to 65,000 ordinary wire nails to hold a small house together. The nails are cheap—perhaps \$100 a house—but . . .

**1. Carpenter labor is expensive:** It costs a lot more than \$100 a house to pay carpenters to drive those 65,000 nails. "Much of this labor cost can be saved by using threaded nails, which can be shorter and thinner and still hold much better", says Leonard Haeger, former Research Director of NAHB. "You can drive smaller nails faster and easier; you can drive them three nails a second in a nailing machine, and you can use a smaller nailing machine".

**2. Cheap nails do not make good enough joints.** "I shudder to think what some houses built with green lumber right after the war will cost to maintain as the nails work loose," warns Research Professor E George Stern of Virginia Polytechnic Institute, whose research for the Independent Nail & Packing Co is changing nailing from a trade to a science.

"With today's technology the joint need no longer be the weakest point. With threaded nails we can assemble wood, plywood, and hardboard into components stronger than the members. The nails have such holding power that the members will fail before the joint. Because of this:

"1. You can use thinner nails that are less likely to split the wood. For years the Forest Products Laboratory has urged the use of thinner and shorter nails to avoid splitting lumber, because split members in lumber connections are worse than useless. Thin nails can almost completely avoid split tongues in t & g materials. And thin nails permit the use of more nails per given joint area without weakening the wood—a great advantage for builders who use all-nailed trusses.

"2. You can use shorter nails, which pop less even in green lumber, because how much a nail backs out during seasoning varies with its length. In properly seasoned wood the short threaded nail completely eliminates popping. This is especially important for drywall and for roof sheathing, where a popped nail can damage the weather coating above and cause a leak.

"You can get the added joint strength needed to space studs 24" o c instead of 16" o c by end-nailing 3¼" x 0.135" threaded nails instead of 3½" x 0.162" common nails. You can fasten flooring four times as effectively with 2½" x 0.113" hardened high-carbon steel helically threaded nails than with the commonly used 2½" light cut nail. For fastening subflooring the 2⅝" x 0.101" annularly threaded sinker is five-and-a-half times as effective as the 2½" x 0.135" common wire nail."

"3. You can save the time you sometimes have to waste clinching common nails. The holding power of the threaded shank makes clinching superfluous.

"Newest development in engineered nailing is an extremely slender, hardened high carbon steel annularly or helically threaded spike in lengths up to 9". Two or three of these spikes can do a better and tighter job fastening corner posts to wall panels than the steel plate now required above each corner post in LuReCo construction—at one fifth the cost. "For maximum economy engineered nailing requires more different nails of different types than builders usually use."

These nails are now available from several makers. They cost more per pound but less per nail. Their use is approved by FHA, but you may have to justify the use of less and smaller nails than the present FHA nailing schedule calls for.

Here is a nailing table prepared by Architect Leonard Haeger showing some engineered nailing schedules accepted by most FHA offices:

framing schedule	current FHA—common nails					engineered—threaded nails			
	number of spacing	size, D.	length, in.	diam., in.	no. per lb.	number or spacing	length, in.	diam., in.	no. per lb.
Joists to sill or girder, toe nail	3	16	3½	.162	49	3	3¼	.135	73
1 x 6 subfloor to joists, face nail	2	8	2½	.135	106	2	2⅝	.115	182
1 x 8 subfloor to joists, face nail	3	8	2½	.135	106	2	2⅝	.115	182
sole plate to joists or header joist	16" oc	16	3½	.162	49	16" oc	3¼	.135	73
stud to sole plate, toe nail *	3	16	3½	.162	49	3	2½	.120	117
stud to sole plate, toe nail *	3	10	3	.148	69	3	2½	.120	117
stud to sole plate, end nail	2	16	3½	.162	49	2	3¼	.135	73
top plate to studs, end nail	2	16	3½	.162	49	2	3¼	.135	73
doubled studs *	24" oc	16	3½	.162	49	16" oc	2½	.120	117
doubled studs *	30" oc	16	3½	.162	49	16" oc	2½	.120	117
top plates, spike together	24" oc	16	3½	.162	49	24" oc	3¼	.135	73
ceiling joists to plate, toe nail*	2	16	3½	.162	49	2	3¼	.135	73
rafter to plate *	3	16	3½	.162	49	3	3¼	.135	73
1" x 8" sheathing	2	8	2½	.135	106	2	2	.120	147
plywood:									
subfloor to joists, edges	6" oc	8	2½	.135	106	6" oc	2⅝	.115	182
subfloor to joists, intermediate	10" oc	8	2½	.135	106	12" oc	2⅝	.115	182
roof sheathing, to rafters, edges	6" oc	6	2	.120	181	6" oc	1¾	.120	165
roof sheathing, to rafters, intermediate	12" oc	6	2	.120	181	12" oc	1¾	.120	165
horizontal bevel siding		8	2½	.135	106		2⅝	.115	182

\* FHA requirements vary





## Plan to use glue wherever you can

### Advice No. 13

A good, glued joint can be the strongest, most lasting, most rigid connection you can make, and it is often cheaper than weaker joints.

Most architects and builders are so accustomed to using nails that they are slow to realize how much better many parts can be held together with glue. Modern chemistry has developed an adhesive for almost every need.

Most important new way to use glue is to fasten drywall to studs and ceiling joists (or trusses) (HOUSE & HOME Apr, '58). Developed and sponsored by US Gypsum, this method cuts the number of needed nails in half. You use only enough nails to hold the drywall tight against the framing lumber while the adhesive sets. One nail every 16" is enough on walls, one every 12" is enough on ceilings. This cuts the danger of nail popping, saves half the finishing labor now wasted hiding nails and nail holes. The glue is applied with a caulking gun. (See photo)

### Here are other important ways to use adhesives:

1. Use glue to set ceramic tile. Use 3M's C-11. It is stronger than cement and much easier to spread, and it does double duty as waterproofing behind the tile.
2. Use glue in your roof trusses. The glue-nailed truss is the most rigid truss of all and one of the cheapest and strongest. Casein or phenolresorcinol are best. Both must be allowed to set overnight at room temperature.
3. Use glue to fasten a plywood subfloor to the joists. It cuts the chance of squeaks under a wood finish floor and it cuts the chance of nail popping under resilient flooring. Use phenolresorcinol.
4. Use glue to fasten exterior siding to the studs where the siding is to do double duty as sheathing; the less nails you have to drive through the siding the better. Use phenolresorcinol.

#### And of course

- Use glue to fasten underlayment to a subfloor. Linoleum paste is cheapest. Any adhesive will do.
- Use glue to laminate a second layer of drywall. Use drywall finishing cement.
- Use glue to lay any flooring on concrete. Use whichever glue the flooring maker recommends.
- Use glue to install plastic wall coverings or counter tops. Get the manufacturer's advice about a contact adhesive.
- Use glue to attach acoustical tile to walls and ceilings. Use 3 M's acoustical tile adhesive; it is thick like putty, helps level the ceiling.



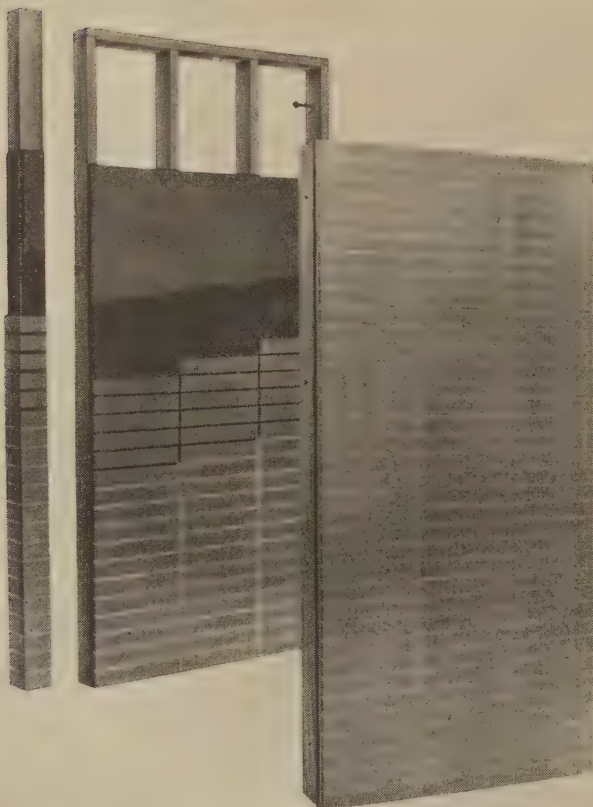
## Plan to use less brick to look like more

Home buyers like brick houses. In many parts of the country, especially the South, it is hard to sell them anything else.

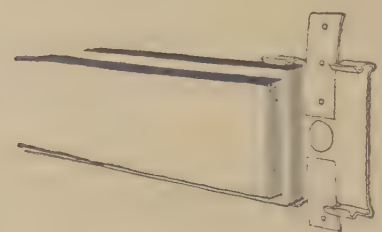
No trade association has done more to develop new ways to use its material more economically than the brick industry through the Structural Clay Products Research Foundation. It has developed thicker bricks for thinner bearing walls, thinner bricks for brick veneer, bigger bricks for economy in laying-up, bricks with hand grips for faster bricklaying, brick veneer wall panels for looks and reinforced brick wall panels for structure.

**If you want the sales appeal of a brick house at minimum cost, here are the things you should do:**

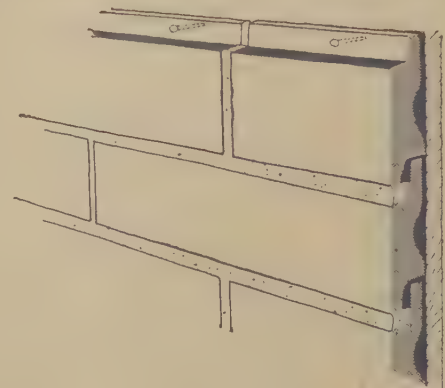
1. If you use brick only as a veneer, use it as thin as you can. There is no point in putting on brick 4" thick, when you are just using it for eye appeal.



You can get a preassembled 4'x8' nail-on panel of brick (cement).



You can get a brick  $\frac{3}{4}$ " thick to clip on and grout.



You can get a brick  $\frac{3}{4}$ " thick to nail on and grout.





2. If you use brick structurally, use bricks thick enough so that one course is all you need. Cavity walls made sense before we had insulation; today they make no sense at all.

← You can get load-bearing panels of precast reinforced brick masonry. These are 1'x8', with a channel down the inside face of each panel to anchor furring.

With these panels, five men can erect and grout 1200 sq ft of brick bearing wall in only 5½ hours.

You can get a brick that's 2-3/16" high, 11½" long, and 5½" wide, developed by SCPRF for quicker construction.



You can do as Builder Alan Brockbank of Salt Lake City did—work with your local brick company to develop a still bigger brick: 3½" x 11¾" x 5½". Brockbank figures his big bricks save him about \$190 a house. Both Brockbank's brick and that developed by SCPRF have a double row of holes for easier handling.

3. If you use brick for decoration, keep it in a rectangular panel. Masons can lay up the brick fast and cheap if they have no openings to work around.

Don't hang brick lintels over doors and windows.

Don't set bricks under windows unless you are running a band across the house at sill level.

4. And keep looking for new developments that will cut brick costs further.

*There will be packaged brick.* A new machine can wrap up to 100,000 bricks a day in easy-to-handle packages.

*There will be lightweight brick.* It will have the same strength, and probably the same shapes, but it should be 40-50% lighter and have better insulation value.

*There will be glazed terra cotta panels, glazed facing tile panels, and common brick panels.* You can use them both indoors and out.

*And there will be a new way to tie bricks together,* so a brick wall could resist hurricanes, blast, and tornadoes.



# Use concrete block—

Advice No. 15

# the cheapest way of all to build

See how concrete block adorns the Ennis House!





Block is cheap to buy—about 10¢ apiece for 8"x4"x16" or 18¢ for 8"x8"x16"; and block is cheap to lay; one block 8"x8"x16" fills as much wall as 12 modular bricks. It is the only common material that combines structure, insulation, exterior and interior finish.

*Says Frank Lloyd Wright:*

"Concrete block was the cheapest and ugliest thing in the world. It lived mostly in the architectural gutter as an imitation of stone. But why shouldn't it be fit for a new phase of our modern architecture? It might be permanent and beautiful. It would certainly be cheap. Why not see what could be done with it?"

"So I decided to use the concrete block shell and fill it with steel rods. And I had found a simple way to produce a whole building that looks the way a machine would make it. The block was tough and light; imperishable and plastic; and yet machine-made, mechanically perfect, with no unnecessary lie about it anywhere."

Concrete block started in the basement, where nobody cared much what it looked like so long as it was so cheap, but 40 years ago Frank Lloyd Wright spotted its plastic potential, added steel reinforcing, and began using it above ground to do double duty as both structure and ornament for some of the most beautiful and romantic houses ever built. (See photo opposite). Now many other top flight architects like Paul Rudolph, Rufus Nims, Smith & Williams, and Alfred Browning Parker use it in fine houses, exposing the block outside and often inside, too. Says Parker: "The only real problem with block is getting your wiring and mechanicals around the house within the walls."

Concrete block can be used almost everywhere. Wright has used it as far north as Minnesota and as far east as Massachusetts. But up to now it has been used mostly in hot climates.

Concrete block is one big reason why Phoenix Builder John Long builds cheaper than any other builder in America. Says Long: "A one-thickness block wall costs about 12% less than studs, plus insulation, plus drywall, plus sheathing, plus siding." In warm climates like southern Florida, Arizona, and parts of Texas few builders' houses are made of anything else. Some builders like Long leave the inside surface exposed; in Florida, where dampness and heavy rains are constant problems, most builders like Tom Coogan and the Mackles find it cheaper and better to fur plaster the inside and stucco the outside than to buy better blocks, lay them more carefully, and waterproof them.

In dry southern California, where Wright built most of his concrete block palaces and where you might expect block to be even more practical than in wet Florida, concrete block is used mostly for decoration. Explains Architect Dan Palmer: "Concrete block has to be reinforced to stand up against earthquakes. If you've got a high wall, it acts like a giant cantilever. So block is used out here mostly as a veneer and for low walls—up to 6'."

## Now new techniques promise better block building

1. You can buy blocks with marble chip surfaces for 59¢ for 8"x4"x16" or 74¢ for 8"x8"x16".
2. You can buy blocks cheap (8¢ to 10¢ more per block) cast in almost any pattern. (Frank Lloyd Wright used patterned blocks 40 years ago, but the patterns cost more in those days.)
3. You can buy block cheap in many integral colors, or you can use new paints (oil, rubber and resin-emulsion) to color them in place.
4. You can buy insulating block that will keep out heat and cold (32¢ for 3¾"x7½"x20" block, 63¢ apiece for 7½"x7½"x20" block)—lightweight blocks of foamed concrete. With a U factor of 0.11, they are equal to 2" batt insulation with wood siding and wood sheathing; or 1½" fiberglass insulation with wood siding over wood sheathing.
5. You can buy block in many sizes and shapes to get a more pleasing pattern than you get with the ordinary 8"x16" rectangle.
6. You can make block waterproof. New clear silicone paints cover the concrete with an invisible water repellent film at a cost of only 2¢ to 5¢ for enough material to cover 100 sq ft. These can be either brushed or sprayed-on. They will keep the house dry for three years at least and can be repeated do-it-yourself, or you can waterproof the block with two coats of cement-base paint that lets vapor escape but keeps rain out.
7. You can prevent surface cracks by laying wire mesh or steel between every second or third course.





## Plan for less waste in painting

### Advice No. 16

Painting most houses takes more on-site manhours than any other trade except carpentry, and carpenter manhours are being cut so fast by more efficient methods that painting may soon be home building's No. 1 labor cost.

Most of these painting manhours are wasted doing work on the job that should be done in the factory, or doing work on a ladder that should be done on the ground, or doing work that should be done a completely different way.



Here are some ways to cut your on-site painting costs. If you take them all you will save hundreds of dollars per house and get your houses finished much faster:

**1. Buy everything you can pre-finished**

Kitchen cabinets, doors and closet fronts, flooring, natural wood panels, decorative wallboard, some acoustical tile, and some insulated roof deck—these and other items can be bought requiring no field labor for painting and finishing.

**2. Buy materials that are easy to paint**

Surfaced or overlaid plywoods and sidings are easy to paint; so are some species of lumber like redwood, cedar and Ponderosa pine, and the better grades of some other woods. Don't waste hours of your painters' time covering up knots and other defects in cheap lumber. It will cost you a lot less to buy better wood wherever it will show.

**3. Insist that everything you will have to paint**

**is prime coated before delivery**

If you can't buy it preprimed, then prime coat it yourself as soon as you get it—preferably by dipping or spraying. Builder Al Branden, of Haywood, Calif, figures that he saves \$75 a house this way.

**4. Don't install anything on the outside of the house**

**until it is ready for the final coat of paint**

Builder W W Holden of Sunnyvale, Calif, has his siding



painted on horses, partly to speed up his painters, partly to be sure bare spots won't show when the boards shrink.

**5. Use one of the new paints**

Paint chemistry has made more improvements since 1945 than in all previous time. Don't let your painters mix their own paints—factory-controlled, ready-to-use paints are better. Don't let your painters thin the paint. If necessary, weigh the paint to make sure they are not tampering with it.

**But all these savings are small compared to what spray will save**

All the new paints can be made for spraying, and new spray equipment promises to transform painting from the slowest and most wasteful building operation to the fastest and most efficient. Hot sprays dry almost instantaneously, with paint of such high viscosity that one sprayed-on coat will be thicker than three brushed on. Airless sprays minimize the need of masking, minimize clean-up time, minimize paint waste (which runs as high as 40% with some cold sprays). Even with cold sprays, Bill Levitt and Andy Place have painted an 8' x 12' room the equivalent of two coats in eight minutes.

Building is the only big industry left that still applies paint

with a brush (and a too narrow brush at that). Every other big industry applies paint by spraying or dipping at a small fraction of what brush painting costs.

Instead of bargaining with the painters whether to pay them \$3.70 an hour or \$3.80 an hour to waste most of their time, builders should be working out a brand new deal to pay painters much higher wages to get the painting done much faster with today's best new materials and equipment.

Spray painting is no job for the do-it-yourself amateurs who now apply 60% of the paint used in this country, so union painters are not always averse to spray painting in return for premium pay.





## Plan carefully for air conditioning

"Within a few years any house without air conditioning will be obsolescent, so FHA wants to encourage builders to air condition all the new houses they build." So says FHA Commissioner Norman Mason. (H&H, Jan '58)

Almost everybody wants air conditioning, and air conditioning offers builders their one best way to dramatize how much better houses they can build today than 30 years ago. But the whole house has to be planned for air conditioning if the cost is to be kept low enough for everyone to afford it.

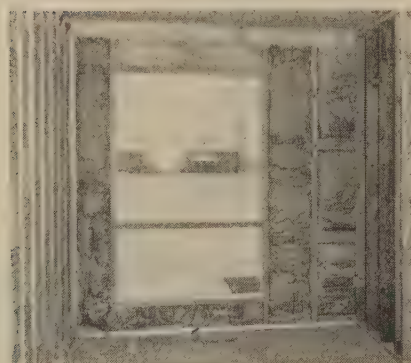
"With good planning a good builder should be able to air condition a 1,200 sq ft house for \$600," says Texas Builder Dick Hughes, past president of NAHB and No. 1 apostle of air conditioning. Fischer & Frichtel of St Louis put two tons of cooling in their houses for only \$400; Fred Kemp of St Louis includes two tons as a standard item for \$500; Andy Place in South Bend adds three tons in his 1,952 sq ft house for \$825.

Most of these builders insert a summer cooling unit in their winter heating systems and size the ducts a little bigger. (You have to blow more air through the ducts for cooling; otherwise the cooling air would have to circulate too far below room temperature and you would get a cold zone around the register. But Kemp uses wet radiant heat in winter, puts a separate chilled air system in the ceiling for summer.) Now self-contained zone units are available at competitive costs, some of them designed for in-wall installation.

Good planning for air conditioning begins with planning a house that will be easy to keep cool (with or without air conditioning). There's no use installing four tons of cooling if correct design could cut the cooling load to two tons. Insulation makers say a properly designed, properly insulated 1,200 sq ft house can be heated and cooled anywhere in the US for \$128 a year.



### Here are nine ways to cut the cost of cooling:



- 1. Put at least 2" of bat insulation  
(or its reflective equivalent)  
in walls and 6" in the ceiling**

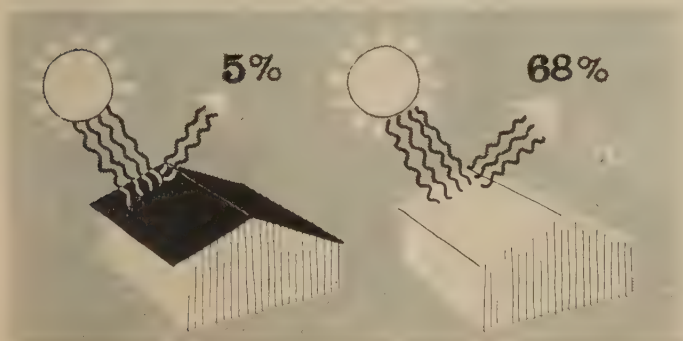
In cold-winter climates this adequate insulation will soon pay for itself in cheaper heating alone; it will save twice as much when summer cooling is added. The home buyer will save on fuel; the builder will save on a smaller furnace and a small conditioner.





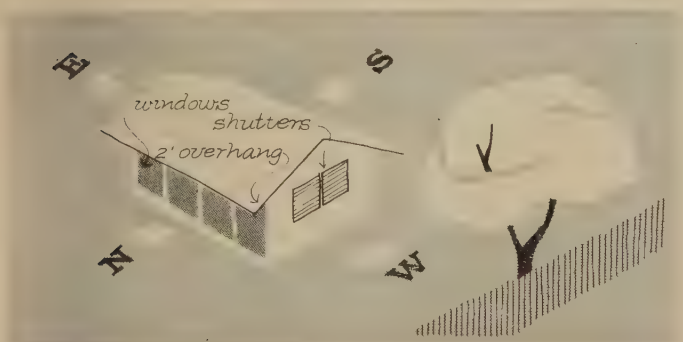
## 2. Keep your attic cool

Most attics are so badly ventilated that they heat up to 140° or more. Even with the best insulation some of that heat is bound to get through the ceiling and put a needless load on the cooling system. The 4 sq ft vents most builders put in their gable ends are nowhere near big enough; for example the ventilator shown in gable end of picture above.



## 3. Use a light colored roof

Nearly 90% of the exterior heat load on a house comes from the hot sun shining down on its unshaded roof. A white roof will reflect 68% of that heat back; a dark roof will reflect back only 5% and give you a mighty hot attic.



## 4. Keep the sun off your glass areas

Even a four-ton compressor can't keep a small house cool if you let the sun shine long through a big window; 150 times as much sun heat comes through a sq ft of glass as comes through a sq ft of insulated wall at maximum conditions.

So put at least a 2' overhang and preferably more over all east, and west, and north windows (the summer sun is in the north) and provide special shading (with trees, trellises, fences, or otherwise) for all big windows facing west. Says Builder Dave Slipper: "Good-sized trees are the best and cheapest shading device. They cost least to buy; they cost nothing to maintain; and year by year their value increases as they grow." Inside Venetian blinds are not the answer; at best they will re-radiate only 35% of the heat. Once the heat comes through the glass the damage is done.

## 5. Build your house on a slab

Slab houses are easier to keep cool because the great mass of concrete acts like a fly wheel. The house can't heat up until the slab heats up too; and you can store up a big cooling reserve in the slab at night by running the cooling unit around the clock in extra hot weather.

Incidentally, it's always better to keep a slightly under-sized cooling unit running longer and storing up cooling in the structure than it is to have an oversized unit stopping and starting, because humidity starts building up the minute a compressor stops running.

Thurman C. Smith



## 6. Blow your kitchen heat outdoors

A two-ton compressor can't cool a house as fast as a kitchen stove will heat it up. There is only one thing to do with kitchen heat. Turn on an exhaust fan to blow it out—and vent your oven right under the exhaust fan hood, to get rid of the oven heat too.

## 7. Offer double glazing as an option

It will cut winter heating bills enough to pay for itself quite quickly in cold climates; it will pay for itself faster by cutting cooling costs in summer too—but not enough people understand this saving yet.

## 8. Put an automatic closer on all the outside doors

Nobody can afford to cool all outdoors.

Ernest Braun



## 9. Vent the steam from shower, clothes washer

Electric compressors and gas absorption units do a fairly efficient job taking heat out of the air, but they are much less efficient taking moisture out. A water-soaked canvas shower curtain put such a load on the cooling unit of one Texas house that a two-ton compressor could not keep the rooms comfortable. A cooling unit must work harder to get rid of a pint of water in the air than it works to cool 6,000 cu ft of dry air 10°. It costs a lot less to blow steam out of the house with an exhaust fan than it costs to get rid of it with air conditioning.



Advice No. 18

## Here are 11 low cost ways to add enough storage

Twelve years ago our best prospects were young veterans just out of service. They didn't care much about storage space because they had very few belongings and very little money to buy things.

Today your best prospects are families in their middle thirties who have been on a buying spree for ten years. Two out of three new houses are sold to second-time buyers—people dissatisfied with where they have been living.

And more home owners are dissatisfied with the inadequate storage in their present homes than with any other fault. This is the No. 1 finding of the Home Improvement Council's big consumer research early this year.

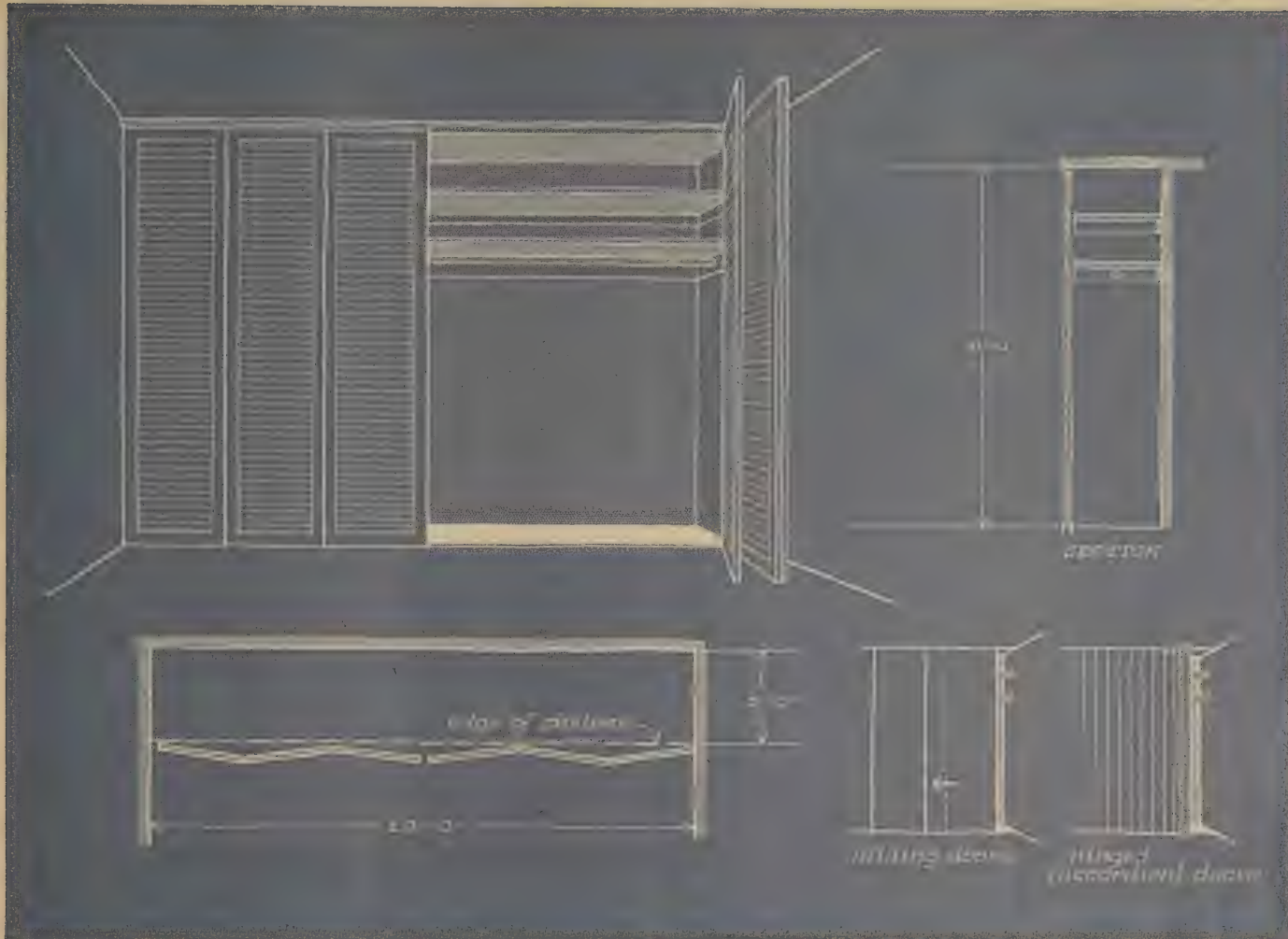
To give buyers the storage they want and need you don't have to plan their garage as a two-car attic and you don't have to dig them a \$3,000 basement. You can provide most of the storage they need in space that you now waste. So . . .



### 1. Stop wasting the attic

Smart builders like Andy Place, Bob Schmitt, and Bob Gerholz, all fit 24" wide disappearing stairs between their trusses to make up to 400 sq ft of rough-floored attic space easy to reach and use. This attic storage is better than basement storage because it's dryer. It is better than garage storage because it's safer (and hides the mess). Total added cost for making it usable is less than \$100 vs perhaps \$3,000 for a basement. (Bob Schmitt gets 400 sq ft for \$76—spends \$26 for a disappearing stair installed, \$40 for  $\frac{3}{8}$ " plywood flooring, \$10 for labor to lay it.) Sometimes Schmitt puts in not one but two disappearing stairs, one in the garage, one in the bedroom hall, to make attic access even easier. But he warns: "Don't make your stairs more than 24" wide. The narrow hole in the attic floor will keep your buyers from carrying anything up attic too heavy for your truss to carry." (Trusses should be designed for 25 lbs per sq ft on their middle chord.)





## 2. Stop wasting the top of your closets

It costs less to put ceiling-high doors on your closets than to frame in conventional 6'8" doors that make the top 20" of the closet almost unusable. Best and cheapest way to build a good closet is just to close off one whole end of the room

with ceiling-high, wall-to-wall doors. That gives you five sides of your closet for nothing. For the sixth side you can use 8' folding doors, hinged doors, or sliding doors, fastening their hardware directly to floor and ceiling. The top space these 8' doors make usable is no good for active storage, but it is the handiest place to put suitcases or to store summer things in winter and winter things in summer.

Charles R. Pearson

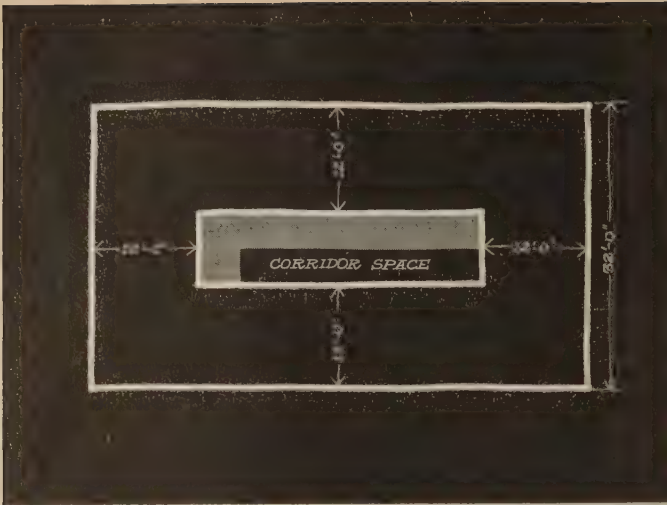


## 3. Stop wasting the bottom of your closets

Most families have few items that need more than 4' of vertical hanging space: men's coats need only 36"; men's trousers need only 48"; children's clothes need less than 36"; women's daytime dresses need only 48"; even long dresses need only 72" to hang straight or about half of that to hang

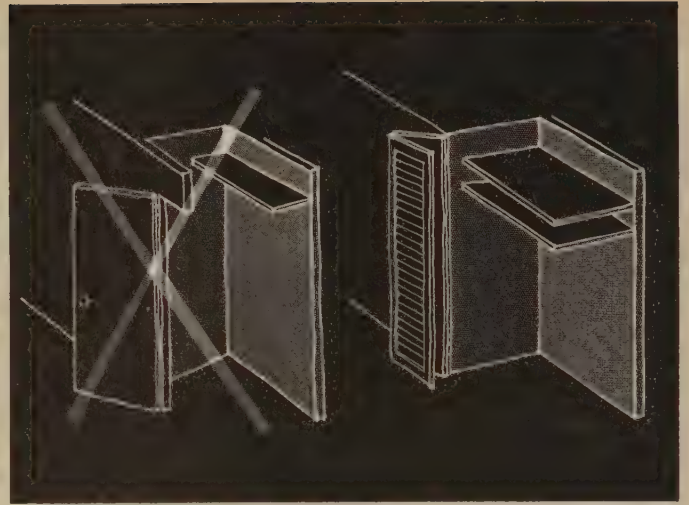
folded once. But most builders go right on putting every clothes closet shelf in the house 66" above the floor with the clothes rod right under it, leaving the bottom 24" to 30" of the closet unused and almost unusable except for shoes on the floor. To stop this waste, either build in drawers at the bottom of some closets or drop most of your clothes poles 18" down and put some drawers and shelves at the maximum-convenience level above them.





#### 4. Use cheap inside space for more bigger closets

Making a 40' house 4' deeper adds 64 sq ft of space more than 12' from a window. That's enough space to double the closet area most builders offer—and Builder Bob Schmitt figures this added area costs him only \$3.37 a sq ft finished; i.e., less than finished space in the basement. (See page 133.) "Use some of this space for a McGee closet 4' square" advises Architect John Highland, past chairman of the AIA Home Building Committee.



#### 5. Stop wasting the depth of your closets

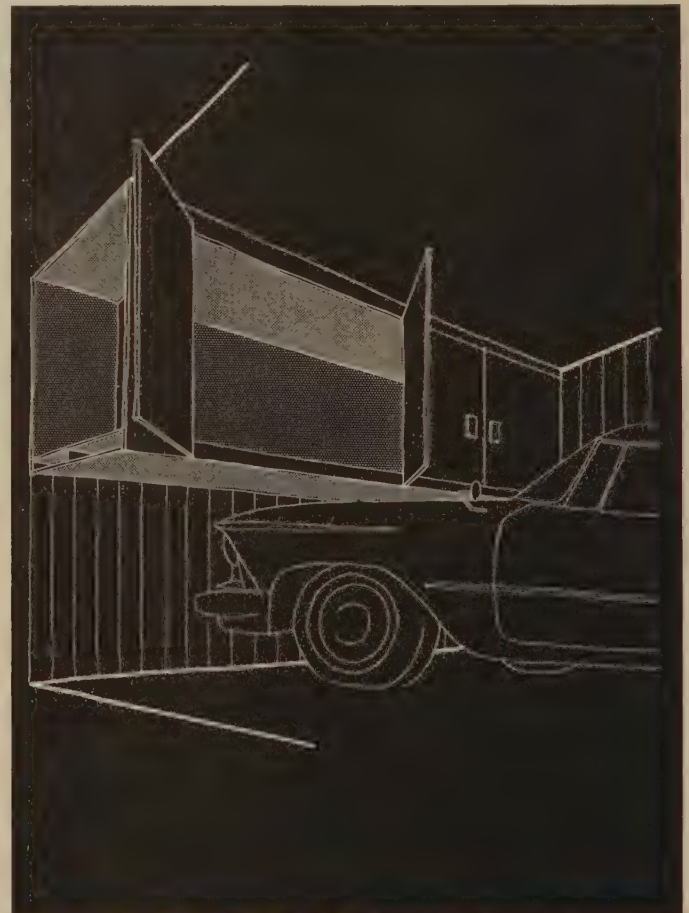
Make all the shelves full depth; ceiling-high doors will make their whole area accessible. Most builders build linen closets deeper than the 14" FHA requires, but still provide shelves only 14" deep. For the cost of a single board they could almost double the linen storage they provide. FHA's suggested new MPS will probably ask for at least 9 sq ft of linen storage for 1 and 2 bedroom houses, and .12 sq ft for 3 and 4 bedroom houses.

Douglas M. Simmond



#### 8. Stop wasting the space above your clothes dryer

This is the best possible place for linen storage if your dryer is located in the bedroom area (as so many architects recommend). If the dryer backs up against a bathroom wall (as it often does to cut plumbing costs), put a back door to the shelves in the bathroom wall. (This convenience was one of the commonest requests at Women's Housing Congress.)



#### 9. Stop wasting the top half of your outside storage

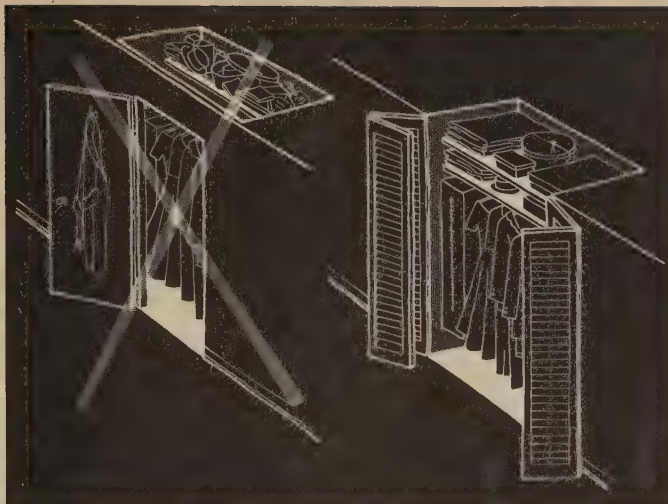
Most outside storage items stand less than 3' high. So if you build a big outside storage area like Bill Levitt's, double deck half of it and provide twice as much usable area for storing lawn furniture in winter. *House Beautiful's* Editor Elizabeth Gordon uses the garage area over the hood of her car to store summer furniture, screens, etc.





#### 6. Stop building clothes closets too shallow

A 20" deep closet won't even hold a man's coat without crushing the sleeves. Make your closets at least 24" deep. And if your buyers are going to put hooks along the back, closets should be even deeper. Says Michigan Builder Bob Gerholz: "Planned, organized storage is a must for maximum salability. We give it top priority." And Phoenix Builder John Long adds: "There is an increasing demand for storage. We are providing more than ever."



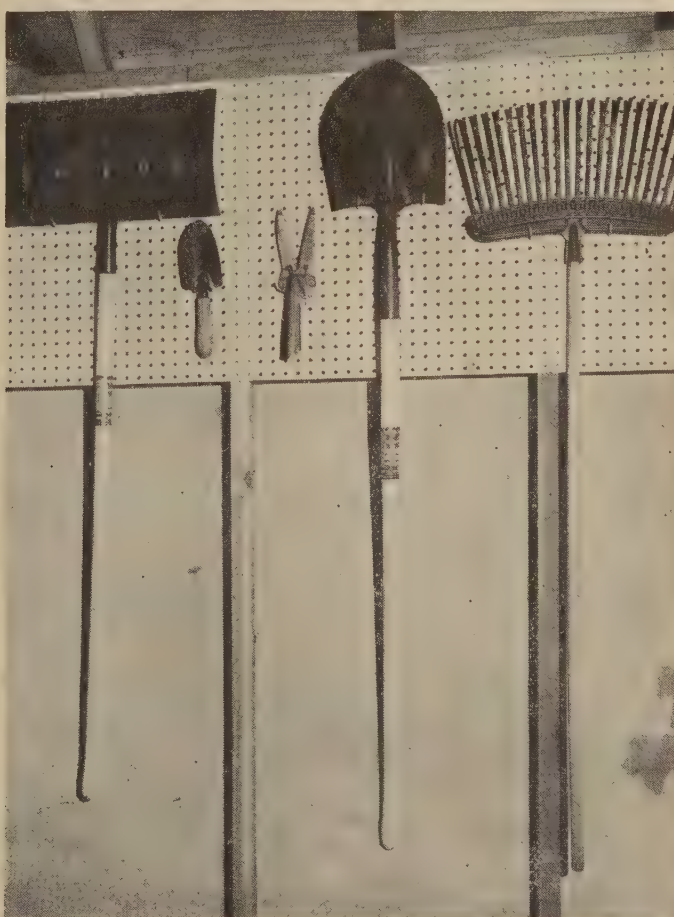
#### 7. Stop wasting the ends of your closets

Run your closet doors end to end. A 30" wide door on a 48" wide closet leaves 9" at each end that will be almost impossible to use. Says Portland Builder Frank Evans: "The more storage the better—not just more space, but more usability." And Dallas Architect Tom Scott Dean adds: "Esthetics notwithstanding, storage sells houses." And Builder Elwood J Turner, Jr, of Media, Pa, finds: "Better storage is an advantage in all price brackets."



#### 10. Stop wasting the space above your cabinets

Under a flat ceiling, run the cabinet doors 44" high to make a closed-in shelf of the cabinet top. This will cost you very little more than furring down the ceiling as so many builders do. The extra shelf space created by these doors will provide dust-free storage for wedding presents and many other items used only once or twice a year.



#### 11. Use pegboard to add storage to your walls

On at least a portion of the inside walls of your garage and storage room. It can be decorative, costs only a little more than drywall and turns walls into highly usable storage areas. "Storage for clothes and personal items has increased greatly," says Architect Rufus Nims. "It is not uncommon for storage to take 30% of the total space—sometimes even more."





# Don't kid yourself that basements are cheap

## Advice No. 19

In the South not one house in five has a basement; in the West hardly one house in four.

But northeast of Kansas City three out of four new houses are still built with basements, because:

**Reason No. 1**—the Northeast is traditionally conservative about houses and slow to give up old ideas.

**Reason No. 2**—people still remember how many slab houses built right after the war had cold, wet floors.

**Reason No. 3**—builders think home buyers want them enough to pay for them. (But Bill Levitt builds without basements and sells far more houses than any builder in the East; Tom Lively, L&H Builders and Bob Alexander build without basements and sell more houses than most builders in Chicagoland.)

**Reason No. 4**—few builders offer adequate storage above ground. (But when Andy Place offered South Bend buyers the choice of 1,360 sq ft of basement or 672 sq ft above ground for \$1,600 less, only one buyer in 7 took the basement.)

**Reason No. 5**—and this is the big reason—most builders think basements are cheap, because a bare basement costs only about \$1 more a sq ft to subcontract than a slab. For example, Rochester Builder Frank Schanz subs his basements for \$1.52 a sq ft for floor, blockwalls, waterproofing, back fill, and sash.





Ben Schnell

## But listen to what the experts say

*Says Architect Leonard Haeger, former Research Director of NAHB and former vice-president of Levitt & Sons:* "Finished space in a basement under ground costs just as much as finished space on a second floor up in the air and sunlight, except perhaps for the added cost of the windows. It costs just as much for the flooring, just as much for the walls and ceiling, just as much for stairs, just as much for wiring, and more for plumbing."

"And if you don't finish the basement, what good is it? It's a bad place to wash and dry clothes, It's a damp and inconvenient place for storage. It's not a healthy place for children to play; and today you need only 6 sq ft for the furnace that used to take half the cellar."

*Says Architect Frank Lloyd Wright:* "A basement is a noisome, gaseous, damp place. Eliminate it wherever possible, and provide its equivalent up on the ground level with modern equipment."

*Says Builder Andy Place:* "Putting a good, unfinished basement under our 1,360 sq ft house costs us between \$3,000 and \$4,000. In fact, we have to charge \$3,000 more for 1,360 sq ft with basement than we charge for the same house 208 sq ft bigger without basement."

"Basements make everything else cost more—more for sewers because of deeper lines, a lot more for plumbing, more for fireplaces because the foundation has to be deeper, more for heating, more for the garage and porch because of more reinforcing in the slab, a lot more for framing the first floor on ladders, and a lot more for messed-up scheduling."

*Says Bob Schmitt of Berea:* "Any builder who thinks basements are cheap just does not know his indirect costs. I can add good space on grade for less money per sq ft than I could add a basement. Putting a basement under a 2,000 sq ft house would run up my costs \$5,000, because nobody can schedule an efficient operation over a hole in the ground."

*Says Builder Ed Fischer of St Louis:* "Basements take a lot longer. If it rains you have a big hole full of water; in winter you may have a frozen lake, and you can't finish basements in the fall for winter building as you can slabs, because frost will get under the exposed foundations."

*Says Builder Clayton Powell of Savannah:* "Basements are in no way cheap; from the builder's point of view they are highly undesirable."

*Says Builder Fred Kemp of St Louis:* "A basement is not cheap space at any price. There are many ways to spend dollars much more wisely."

*Concludes Builder Andy Place:* "Adding a basement costs me as much as adding year-round air conditioning with full insulation, plus an extra bath, plus a family room, plus a dishwasher, plus a clothes washer, plus a garbage disposer, plus 400 sq ft of better storage space in the attic!"

In brief, the experts say:

**The best way to cut basement costs is just to cut out the basement!**

There is no other way to cut your costs \$2,000 or \$3,000 per house without cutting any real living value out of your product.

For two good ways to use basements to build better for less see page 140.





See item 8, opposite

## Slabs and crawl space are equally good— slabs average quite a bit cheaper

Advice No. 20

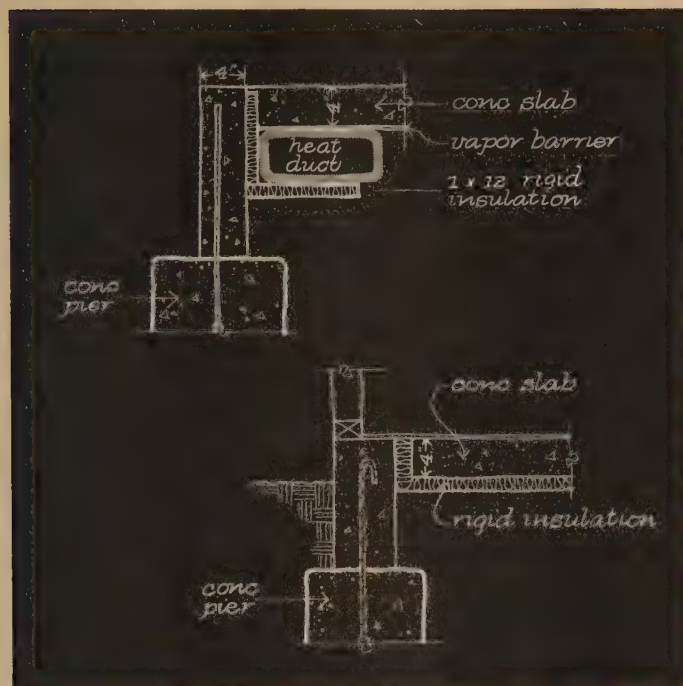
Slabs save Big Builder Bill Levitt \$750 a house compared with crawl space. They save Strauss Bros in Omaha 49¢ a sq ft—\$500 on a 1020 sq ft house. Most builders guess their slab saving is around \$250.

Crawl space costs less only if you have to bring in a lot of fill to grade your house high enough.

Slabs got a bad name right after the war because so many builders built so many bad slabs before they learned to build good ones. But now builders know how to get just as dry a house on a slab and how to heat it just as well; in fact, it is safer to build on a slab if you are worried about water under the house, and better wherever bugs or termites are a problem.

Says San Francisco Architect Bob Anshen: "The only advantage of crawl space is that a great many people prefer hardwood flooring, and you get more resiliency when you lay hardwood over crawl space than if you lay it on a slab."





## 1. Use a grade beam to save \$200

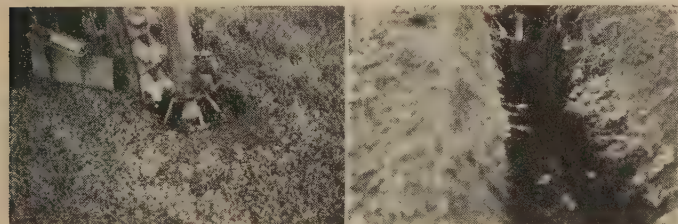
A grade beam is the cheapest foundation. It can be used all over the South and West where frost is no problem (unless bentonite or some other difficult soil requires a very special foundation). In the North and East most codes permit it only on posts extending below the frost line and only in well-drained soil where you don't have to worry about frost-heave under the beam itself. For one or two houses builders may not find it worth the time and money to develop the necessary engineering data and soil analysis, but above ten houses it should begin to show real savings. Builders Bob Schleicher of Gary and Andy Place of South Bend, both building on sandy soil, both think their grade beams save them about \$200 a house on 100-house tracts.

Grade beams are cheaper because: 1) they use less concrete (Andy Place's beam is only 4" thick, extends only 4" below finished grade); 2) you can dig sixteen post holes with a power drill in less than an hour, which is a lot faster than you can trench a deep foundation, especially if you have to splay a spread footing at the bottom; 3) you can set just one exterior form and pour the beam at the same time as the slab (this is seldom wise without a grade beam. See 7 below).

Schleicher's detail is shown at the lower right in the drawing above and on the front cover. Building with trusses, he spaces the posts under the grade beam 8' or 9' oc under the load bearing wall, 10½' oc under the gable ends.

## 2. If you don't use a grade beam, pour your foundations in a trench

In all but the sandiest soil, you can cut a sharp bank and save the cost of forming below grade.



## 3. Flare the bottom of your footings if necessary

On most soil and under most codes, the 8" thickness of the foundation wall is more than enough to support the walls of a small house. But where you need a wider footing, use a bell-bottomed ditcher to flare the bottom (see photos).

## 4. Above ground use re-usable forms . . .

## Or 5. Use concrete masonry; one course is usually enough

Sometimes one is cheaper, sometimes the other. Laying block may bring in another trade. Either way, this is the time to correct any and all irregularities in grade level or dimension. Without accuracy you will lose most of the savings above the slab you could get from panelizing and pre-cutting.

## 6. Compact a deep fill with a mechanical tamper

"This is the most important slab advice," says Research Director Ralph Johnson.

## 7. Put 4" of non-capillary fill under the slab

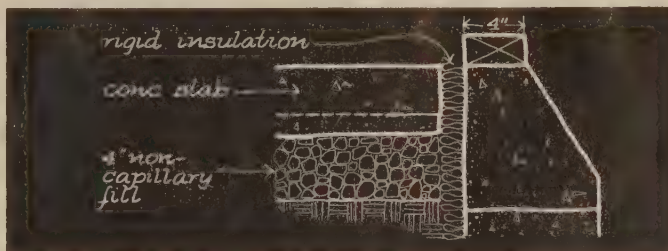
This is always safer, even if it is not always required. Coarse crushed rock or washed gravel are best. If you are sure the water table will never rise within 3' of your slab you can use sand or sometimes omit the fill.

## 8. Use a moisture barrier easy to handle and hard to puncture

It should be elastic at any temperature and never brittle. It should come in wide widths and be resistant to normal foot traffic before the slab is poured. If you use plastic, use it a mil or two thicker than standard so as not to waste time patching punctures. (See photo opposite).

## 9. Don't waste time sealing the joints

Lap each strip of your moisture barrier material 6" over the preceding strips. The weight of the concrete above it will then seal the joints.



## 10. Float your slab independently

Don't rest its edges on the foundation wall. Let them rest on the underfloor fill, just as the center of the slab rests on the underfloor fill; otherwise you will build up unequal stresses in the slab, for the foundations may settle differently. This was the Building Research Advisory Board's advice to FHA in 1955. It is still good advice.

Some builders try to cut costs by pouring slab and foundation walls in one pour. This may be cheaper, but it is seldom better. It requires more expensive waterproof insulation placed outside the foundations. And it can run up labor costs by requiring precision on rough work.

And above a slab never—repeat—never nail an interior partition to an outside wall. If you do, you will have big trouble with cracks as the partition moves with the slab, the wall with the foundation.

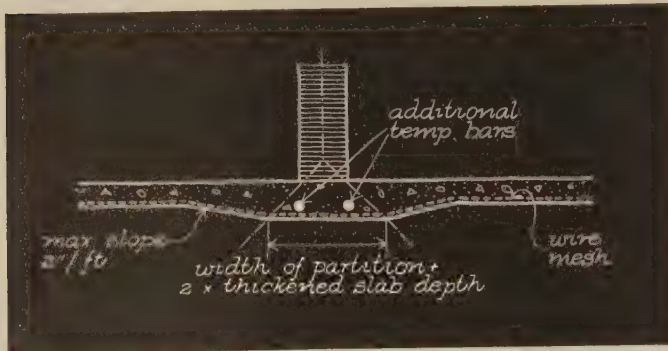
## 11. Don't cut your insulation

Keep the inside of your foundation straight up and down, so you can set one piece of insulation full 2' width against the inner face, between foundation and slab. This is the most efficient place for the material and the easiest place to install it; just set the insulation in the trench when your foundation is poured part way up. Too many builders waste time putting in two pieces of insulation—one vertical and one horizontal, under the edge of the slab.



## 12. Omit footings under non-bearing partitions

They carry no load, so they need no special support. With truss construction all your interior walls can be non-load-bearing and you can lay a single 4" slab from wall to wall (except in T- or L-shaped houses, where you may have one interior bearing wall).



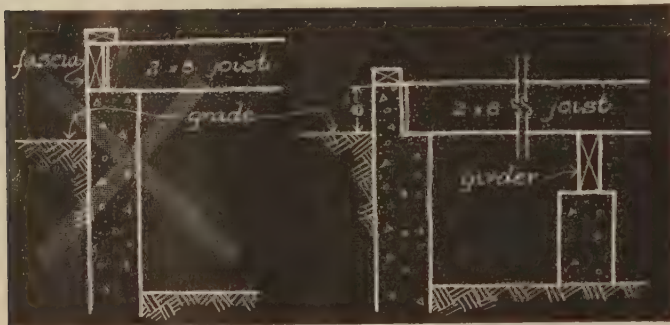
## 13. Just thicken the slab to 8" under interior bearing walls . . .

Make the slope gradual, not a sharp break, and add two 1/2" reinforcing rods in the beam, which must be 16" wide.

## If you build on crawl space:

### 1. Use re-usable forms

They will give you better concrete at lower cost—better because they are smoother and will not leak the cement grout, cheaper because they will cut your forming time. They can be set up so fast that one house a day is common.



### 2. Set your house low

There is no good reason why a crawl-space house should stick up out of the ground any higher than a slab house. Just pour a shelf in your foundation wall to support your joists. Then you can lower your plate to 8" above finished grade.

### 3. Plan for more piers

Don't detail a crawl space as you would a basement. Set your piers not more than 8' o c. More piers let you use smaller, lighter, easier-to-handle, cheaper beams and floor joists. With a post hole digger piers are cheap. "My subcontractor has a machine that digs 60 in an hour," says Builder W W Holden of Sunnyvale, Calif. "Above ground, I use 6" circular metal forms—so cheap they aren't worth removing."

On the West Coast where t & g costs less, many builders set their piers 4' o c, using 4x4 beams and no joists at all because the 2" t & g spans 4'.

### 4. Use steel or reinforced concrete girders

Otherwise you will get an uneven floor, for wood girders will shrink 1/4" to 1/2" (depending on their depth) under one end of the joists while the other end, resting on the foundation wall, stays at the original level.

## 14. Slope your foundation on the outside

Use a solid sill block beveled on the outside to reduce your wall thickness to 4", which is all you need to support an exterior wall (except when you are putting on masonry or brick veneer, in which case you can substitute a square cap block without changing the width of your foundation).

## 15. Use pipe screeds on metal supports

They are easier to set, they save wasting 2x4s, and they make less work finishing the slab after they are taken out.

## 16. Do a good finishing job with a power float

A little extra finishing time will save a lot more time laying the floor above; it will let you lay thinner vinyl asbestos flooring without the slab roughness showing through. Says Builder Ed Fischer of St Louis: "It took our floor finishers a little while to learn to do a perfect job, but now they do it right in the time it used to take them to do it wrong."

## 17. Heat the edge of the slab

Either hot water baseboards or perimeter warm air ducts will put the heat where you need it to avoid a cold slab around the outside walls.

## 5. Use a ground cover

A plastic or asphalt-impregnated ground cover will reduce moisture rise 90%. Buy it in rolls just a little wider than the pier spacing and notch around the piers. Don't seal, but lap the joints and let it run up the foundation wall 6". Without a good ground cover the house above will be damp (unless you build in Arizona or some other dry climate).

## 6. Install your insulation early

Install it below grade before you place your floor joists—it will never be so easy. Use cheap insulation 2' wide and just fasten it to the foundation wall with hardened nails. Buy this insulation 2' wide; this will still stop safely above the bottom of the crawl space. To insulate between the joists, cut wall insulation bats into small pieces and shove them between the ends.

## 7. Provide outside light and air

Daylight costs less than electric light. Use vents that can be screened in summer and closed in winter from the outside. Put them near the corners for better cross current ventilation to get rid of dampness.

## 8. Provide outside access

Don't mess up your floor framing for a little trap door. On some grades it may be smart to provide outside access for crawl space storage. A 2" concrete slab poured from excess ready mix and just screeded off will provide excellent extra bulk storage at minimum cost (if you have to worry about water you should not be building over crawl space anyhow).

## 9. Heat your crawl space

Close the vents in winter and provide a warm air supply line opening in the crawl space—or leave the pipe covering off the mains and returns on a hot water heating system. This will help give you a warm floor and a dry crawl space. Some builders use the crawl space as a plenum. This is good for heating but it will not work for cooling.



# Design your houses to look bigger

Every school boy knows there are tricks that will make a line look longer or a rectangle seem larger.

For example,

this line AB



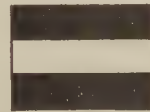
looks longer than

this line CD



but AB is actually shorter.

And this rectangle



looks larger than

this rectangle



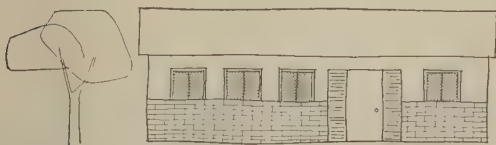
but it is actually smaller.

Just so every builder should let his architect follow these simple rules to give more curb appeal to his houses by making them look longer and therefore bigger and more for the money:



## Don't design a banana split

Don't use different materials in such a way that they split the front of your house into two or three smaller units. That just makes the house look smaller.



## Instead, emphasize your horizontal lines

Emphasize your roof line with a big overhang of at least 2' and don't interrupt your roof line with little jogs.

Emphasize your window head line by lining up the heads of all your doors and windows.

Emphasize your middle line by running a moulding or belt course right around the house at sill level, or perhaps by using a different material, like brick veneer, below the sill line. (But let your architect break such a strong horizontal with some strong verticals like an impressive front door or your house will begin to look dizzy.)



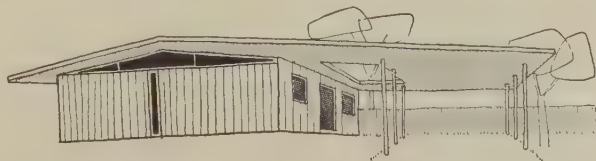
## Extend your horizontals beyond the end of the house

1. Always extend your roof overhang at least 2' beyond each end of the house. A house 40' long with a 44' roof will look a good deal bigger from the curb than a house that really is 44' long if the 44' house has only a 44' roof—but the extra 4' of roof will cost less than a fifth as much as adding 4' to the house itself.

2. Use fencing to extend the middle line at least 4' and preferably all the way to the property line on both sides.

## Make your windows look horizontal

Combine your windows into longer units with panels between; better still, combine your windows in horizontal units so no panel is needed.



## Make the roof big

Put the garage or carport under the same roof as the house.





The shirt front

Advice No. 22

## Don't waste good money on designs like these

**The shirt front.** This is an unsuccessful attempt at making a house look like something it isn't. What I mean by "shirt front" is an expensive front with a switch to something less costly for the sides. A front of brick veneer, sides of vertical boards, for instance; or a front of wood shingles with clapboards at the sides. A shirt front is worst when the contrast between front and sides is greatest: a front of dark red brick and sides of light-colored asbestos shingles.

The whole concept is wrong. It assumes that a house is usually seen from the front. It isn't. It is usually seen from a corner, from an angle.

**The too-high look.** The higher a house is the shorter—and smaller it looks. Consequently, it's best to use a low-pitched roof. There should be wider overhangs at eaves, where the roof meets the walls. Have the highest possible grade level to your yard against the house. All these things help make it look longer, more horizontal, and therefore larger.

**Ugly gables.** Gables are fine if they are used judiciously. Too many gables or badly shaped ones can make a house very ugly.

**The wrong new materials.** Extremely valuable when they are properly used, new materials in the wrong places can spoil an exterior. Witness the house that has a front doorway of glass brick. All it needs to look like a barbershop is colored lights and a neon sign. Corrugated plastic, an attractive new material, is being misused in the same way—turning up in places where it doesn't belong. The moral is: Use new materials carefully, even if they are the latest rage.

**Wrong chimneys.** Most common of badly designed chimneys, is small and tall and not at the gable end of the house.

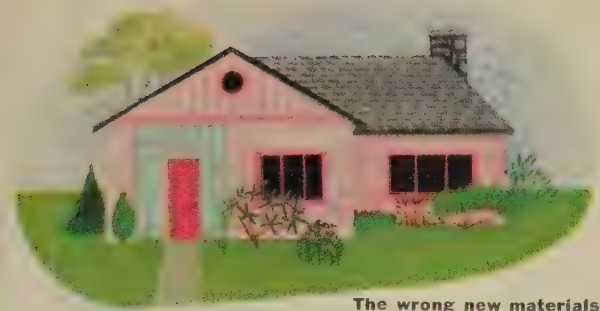


The too-high look



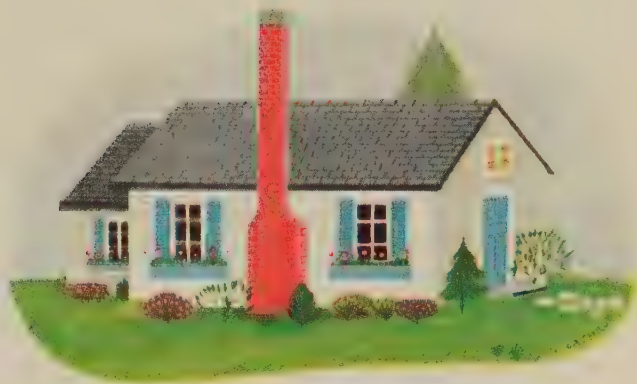
Ugly gables





The wrong new materials

Drawings by June Lathrop



Wrong chimneys

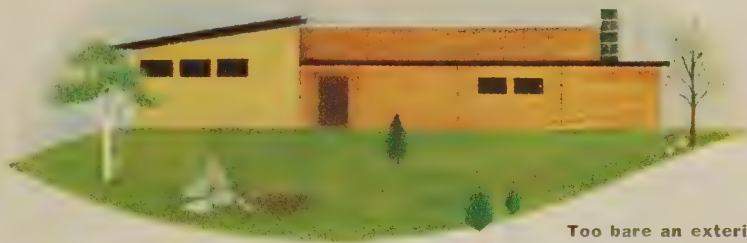
*Here is some good advice*

*by Architect Rudolph A. Matern, AIA*

*designer of thousands of built-for-sale houses,*

*as more than 4,000,000 families*

*saw it in McCall's Magazine*



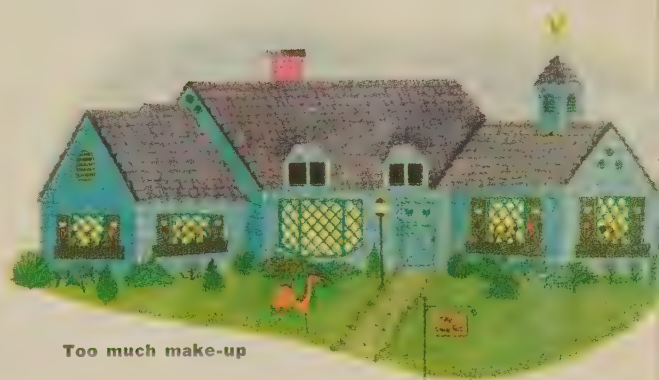
Too bare an exterior

**Too bare an exterior.** A house front shouldn't look like a factory. Your front door should make visitors feel they are coming into a hospitable home.

**Too much make-up.** This can be as disastrous as too little. Some new houses combine brick, stone and shingles—the architect tried to appeal to every taste. Other kinds of overdecoration: too many paint colors or too many frills like exposed rafters, scalloping and different kinds of windows. Take a good look at your house and you may be surprised at how much you see that should come off.

**Experimental exteriors.** These are risky things for investments. Ultramodern can make a house very hard to sell.

**The wrong roof color.** The color of the roof is an important part of the total effect. Those bright blue roofs are the worst offenders. A white roof is an excellent choice. It's nice looking and it reflects heat well. Black, gray and neutral shades are good roof colors. Brown and green are safe, but they may restrict your choice of colors for the rest of the house exterior.



Too much make-up



The wrong roof color



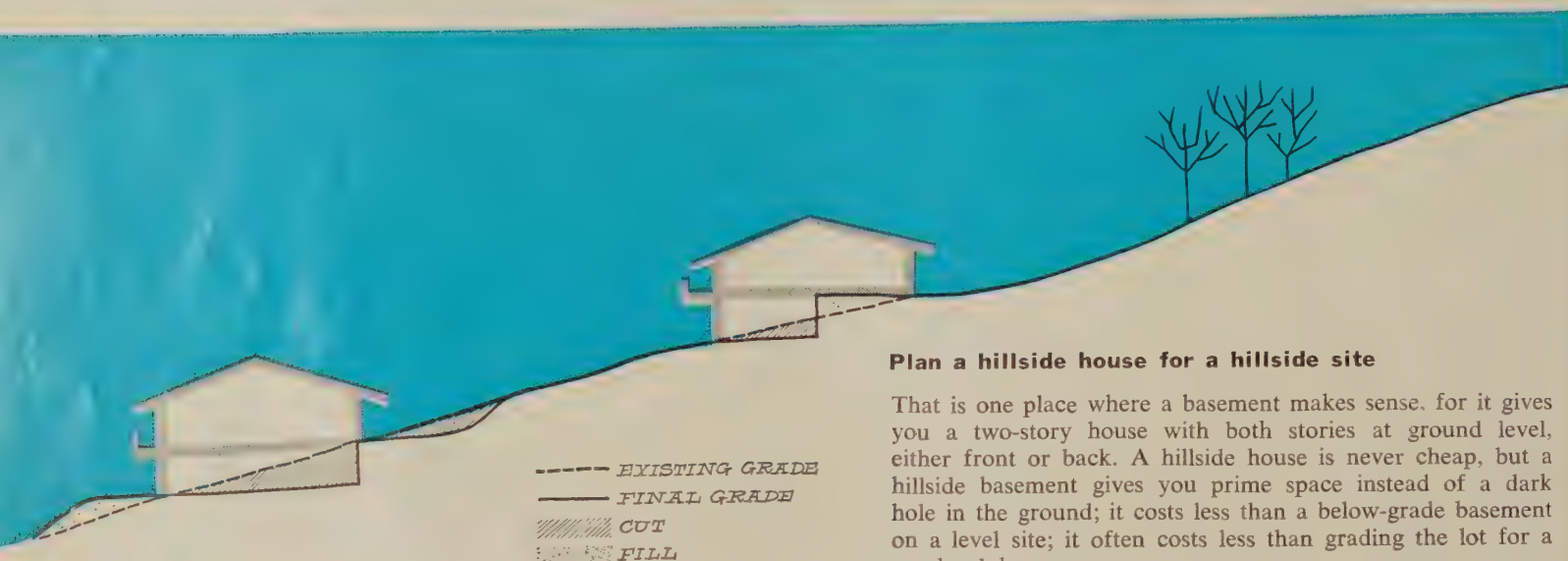
Experimental exteriors



## Plan your houses to fit their site

A house that is right for a 100' lot seldom makes sense for a 50' lot; a house that is right for a flat lot may be all wrong for a hillside lot or even a gently sloping lot; a house that is right for the north side of the street is probably wrong for the south side.

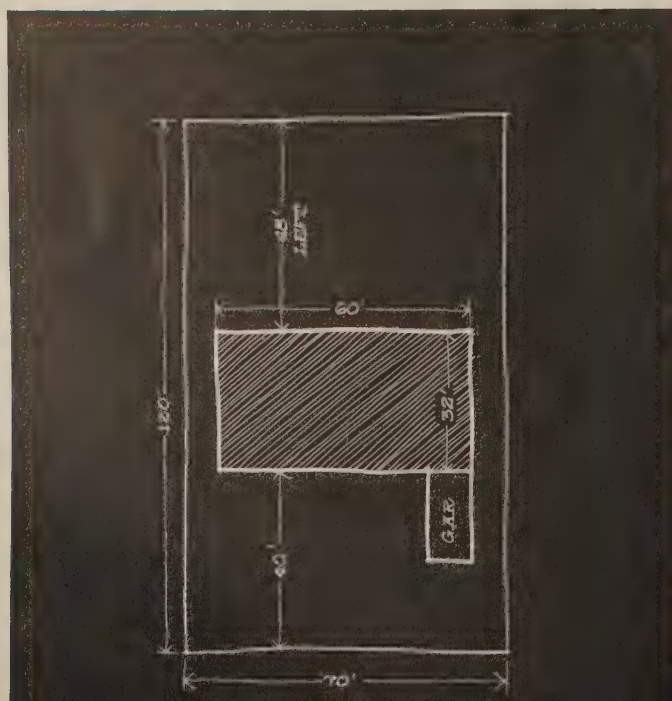
That's why plan book houses often cost more to build than houses suited to the site by a local architect.



### Plan a hillside house for a hillside site

That is one place where a basement makes sense, for it gives you a two-story house with both stories at ground level, either front or back. A hillside house is never cheap, but a hillside basement gives you prime space instead of a dark hole in the ground; it costs less than a below-grade basement on a level site; it often costs less than grading the lot for a one-level house.

Furthermore, the less you disturb a hillside grade the less trouble your buyer will have later with slides and erosion.



### Plan one-story houses if you have enough land

You can't beat the one-story house for convenience and livability, and you can't beat it for construction economy. Except in the tradition-bound Northeast, few of the fine country houses custom-built on flat ground since 1940 have had more than one floor. A level lot 100' wide is big enough for almost any one-story house.

But a 70' by 120' lot with 10% minimum set back on each side is a very tight fit for 1,800 sq ft on one level unless the house is set back 40' from the sidewalk to make room for the garage in front (*see drawing*). And when you put a 40' set back in front of a house 32' deep, you won't have much space left for outdoor living and a garden in the privacy of the rear yard.

Likewise, 60' is very tight for 1,500 sq ft on one level.

Never build a detached house smaller than 1,200 sq ft on more than one level. A two-story house 24 x 24 is almost impossible to plan; its stairs will take up too much space; and anyhow, the house will look silly. A story-and-a-half house is the most expensive of all to build, the Small Homes Council found (H&H, Mar '58).



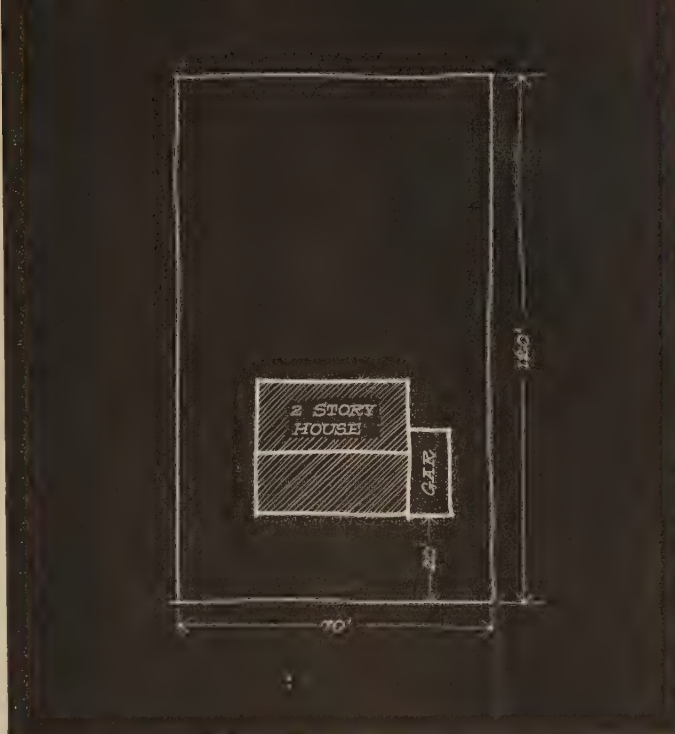
### Build two stories if your lot is too narrow for a Rambler

If you want to put 1,500 sq ft on a 60' lot or 1,800 sq ft on a 70' lot, the two-story house may be your best bet. What you save on buying less land may pay what it costs you extra to double-deck your construction.

But don't build two stories because you think they are cheaper: even for conventional construction the Small Homes Council found they cost more than any other layout except the story-and-a-half. You can't finish the ground floor as one big room; you waste space on the stairs; it always costs more to build on a ladder; and you shackle the plan to make the nighttime area upstairs the same size as the daytime area downstairs.

When builders like Bill Levitt find their two-story cost is less per sq ft, it is not because adding a second floor is the cheapest way to add space; it is because added space always costs less than basic space. Builder Bob Schmitt adds ground floor space at only \$3.37 a sq ft. Levitt charges \$5 a sq ft for 500 more sq ft in his two-story model. (See Page 102.)

One good way to build a two-story house is to use an above ground basement for the lower level, as in Carl Koch's Techbilt house.



### Don't build splits unless . . .

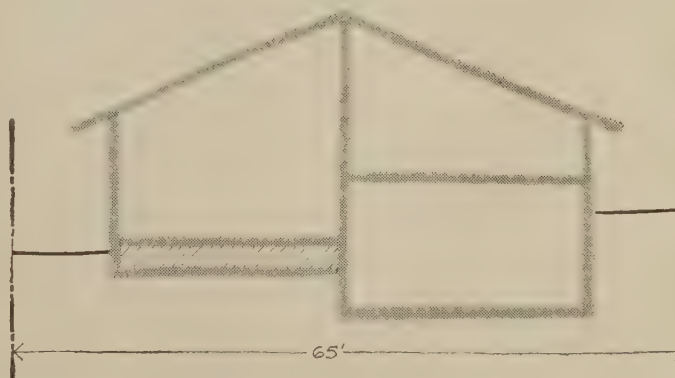
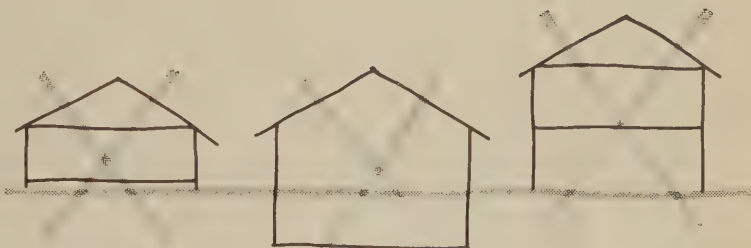
1. your subs will absorb their higher cost for you, or
2. unless your buyers will pay more to get less.

A split costs an efficient production builder more per sq ft than any other floor plan, because no one has been able to devise an efficient way to build one. On a flat site they combine in one package everything that is wasteful in basement construction, crawl space construction, and two-story construction. They defy the economies of panelization, tilt-up, and one-big-room finishing. With few exceptions they are nailed together one stud, one joist, and one rafter at a time with interior bearing walls.

Builders can afford this inefficiency only in areas like Long Island, where builders have little to say about how their houses are built. On Long Island building details are entrusted to highly competitive subs who are hungry for business and bid on a sq ft basis whether the house lends itself to low cost construction or not.

On Long Island and in other subcontractor-dominated markets the split is a fairly good solution if you have to squeeze a slightly larger house and its garage onto a slightly too small lot. The split is no good for houses smaller than 1,250 sq ft and not much good for houses over 1,800 sq ft.

No efficient builder like John Long, Andy Place, Bob Schmitt, Mickey Norman, Dave Slipper, or Clayton Powell ever builds a split. Says Bill Levitt: "Split levels don't make sense for a volume builder. We never build them, because we can give better value in other ways."

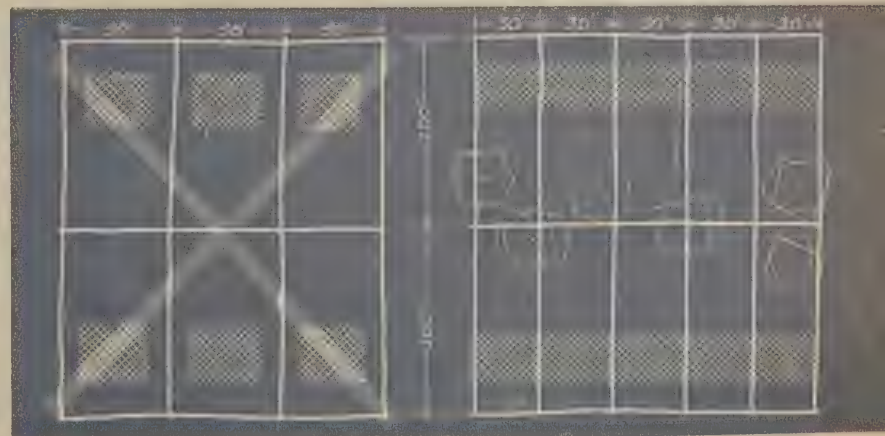


### Plan row houses for high priced lots

Never try to squeeze more than six detached houses onto an acre. Six houses to an acre cuts your lot size to about 50' x 100', which is already too small to justify wasting space between houses on side yards too narrow to be any good.

Two-story row houses 25' and 30' wide with one or two fenced patios per house can be planned to offer as much real enjoyment of the land 13 to the acre as detached houses six to the acre—especially if you reserve some of the land you save for neighborhood play areas big enough for games. (H&H, Oct '57).

Says Ross McKeever of the Urban Land Institute: "At the same density you can get more privacy with row houses on 30' lots than you can with little boxes set directly in the middle of 60' lots."





# Plan your lots for more enjoyment of the land

Cheapest space anyone can add to a house is outdoor space for outdoor living. It is as salable as it is cheap, for outdoor living is what most families move to the country to enjoy. With floor to ceiling windows, it can double the seeming space of small rooms indoors. And all it costs is a little money for paving, a little money for planting, a little money for fences, a little money for attractive outdoor lighting, and a little more thought.

Too many builders pass up this bargain in outdoor living and offer only the ten-times-as-expensive indoor living. Too many new houses make little more provision for outdoor living than a city apartment. Some houses don't even have a door opening directly to the lawn. They have a front door to the front walk, a side door to the garage, and a back door to the service yard to put out the garbage or hang out the wash—but no door through which people can walk out to enjoy their land.

"A house is not a home until it becomes part of its land", says Architect Charles Goodman. "The land a family owns is just as important to its pattern of living as the house. A small part of this land is enclosed for protection from the weather. The greater part of the land stays open to the sky to be enjoyed as the weather permits. The houses we are building today are smaller than families actually need and so, because they cannot afford enough house, people have had to learn to live out of doors.

"Unless and until we concern ourselves more deeply with the land, we will be building houses but not homes. This concern with the land will be recognized and appreciated by the modern home buyer, who has been conditioned by the magazines he reads to expect more than straight rows of pedestrian houses perched on naked, uninteresting land. When he finds what he has been conditioned to look for, you will need no magic sales technique to sell him."

## **Indoor-outdoor living is nothing new**

Before the automobile age all nice houses had a covered porch for outdoor living, with rocking chairs, a swing and a hammock, and people spent half their waking hours there during the warm months. Usually it was a front porch, for in those days the front yard was still a pleasant place and neighbors visited from house to house. But now the street is a raceway for cars and delivery trucks, much of the front yard is a parking area, and the only place left for indoor-outdoor living is in privacy behind the house.

*Says Builder Ray Cherry: "A big windowwall opening the house to the backyard is now a must."*

*Says Architect Quincy Jones: "We cannot meet the need for better homes just by building better houses."*

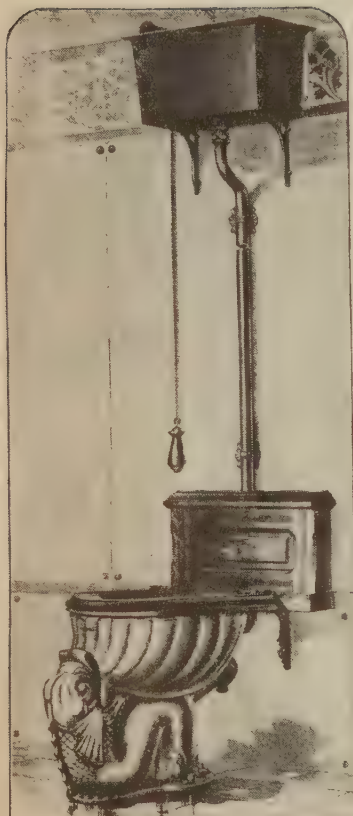
*Says Architect Ed Fickett: "The new FHA standards encourage better use of the site."*







# Here are 29 ways to get better plumbing and better bathrooms for less money



Bettmann Archive

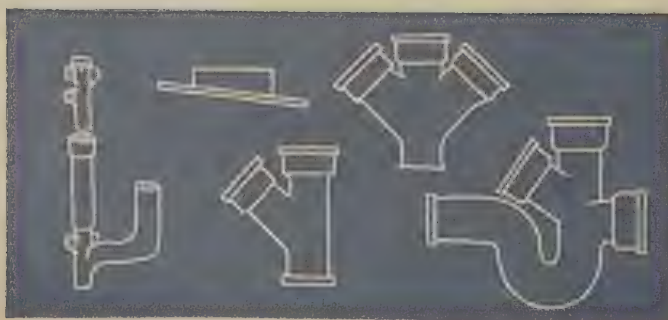
More builders and more architects get stuck on their plumbing and bathroom costs than on anything else they pay for.

Bathroom costs vary more from place to place and from builder to builder in the same place than any other costs. Builders who are both smart and lucky—builders like John Long, Andy Place and Dave Slipher—can add a second tiled 5' x 8' bath for less than \$450 complete, including \$150 for the raw space. Many other builders have to pay twice as much. This is not necessarily the plumber's fault.

One reason plumbing costs vary so much is that so many communities still have archaic plumbing codes. If your city has a bad plumbing code it would pay your local builders' association to challenge its wasteful requirements in excess of the up-to-date requirements of the National Plumbing Code.\* No local government has any authority to set up code requirements beyond what is necessary to protect the life, health, and safety of its citizens, so the courts often throw out code requirements that serve only to run up unnecessary costs by making unnecessary work for local subcontractors.

Another reason plumbing costs vary so widely is that some states permit restrictive local licensing practices to stifle competition among plumbers. Builder Dick Hughes pays \$300 less in Texas than he pays in Oklahoma for identical plumbing in identical houses, because Texas has state licensing for plumbers and Oklahoma does not. But . . .

Biggest reason plumbing costs vary so widely is that few builders are ex-plumbers and few builders know enough about plumbing to work with their plumbers to get better plumbing for less money. Here are 29 ways builders and plumbers can help each other cut costs:

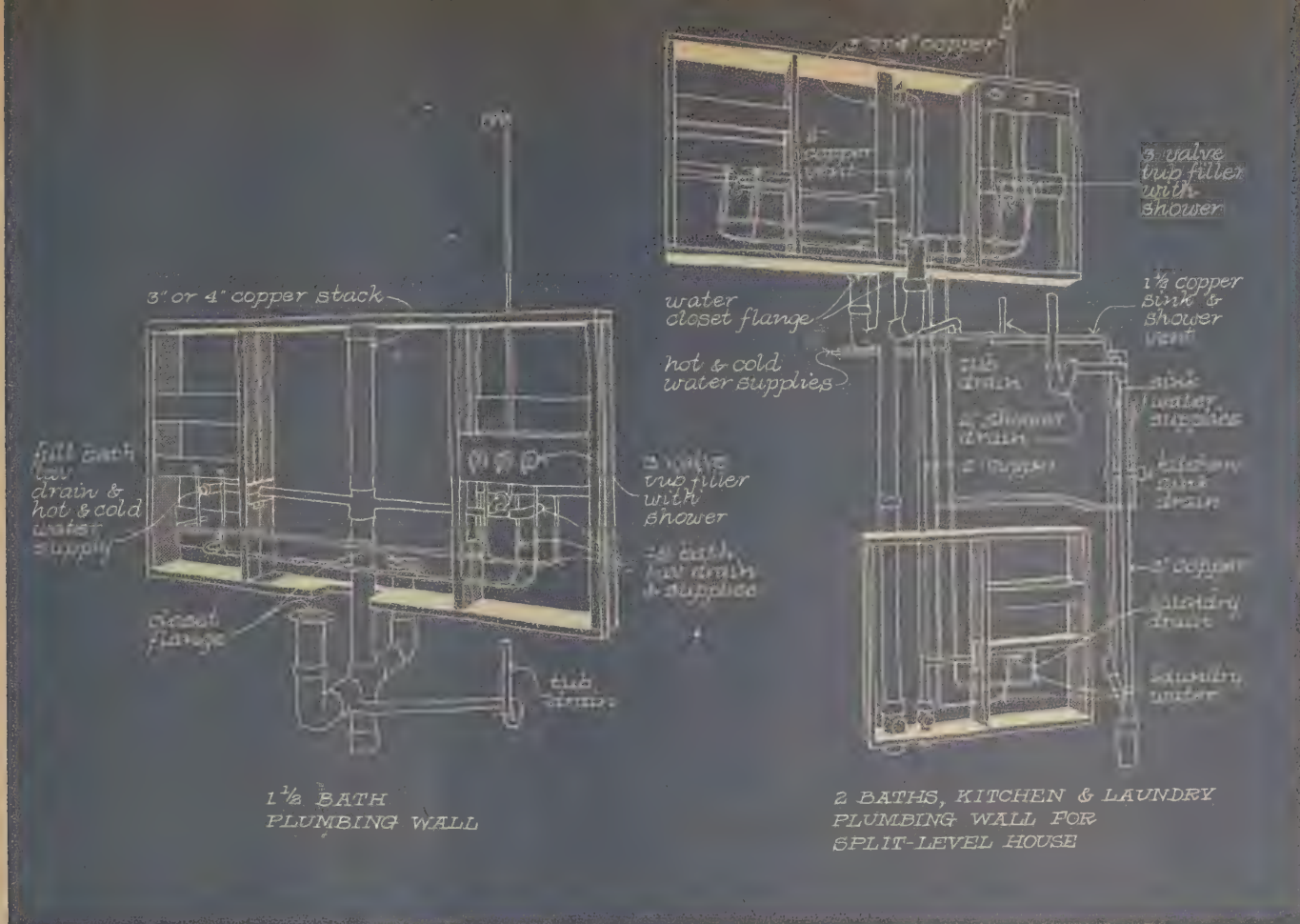


## 1. Make sure your plumber takes full advantage of special fittings

Bill Levitt and Andy Place both figure their simple precast plumbing trees save them \$50 a bath. It will pay you to spend a long evening studying all the special fittings listed in such catalogs as the Alabama Pipe Co. You will find many single fittings that could take the place of three or four in your plumbing wall, and your plumber can buy them for a lot less money than it would cost him to make them.

\*Developed with the help of the US Public Health Service, the American Public Health Association, the Housing & Home Finance Agency, the Department of Commerce, the National Association of Plumbing Contractors, and many others.





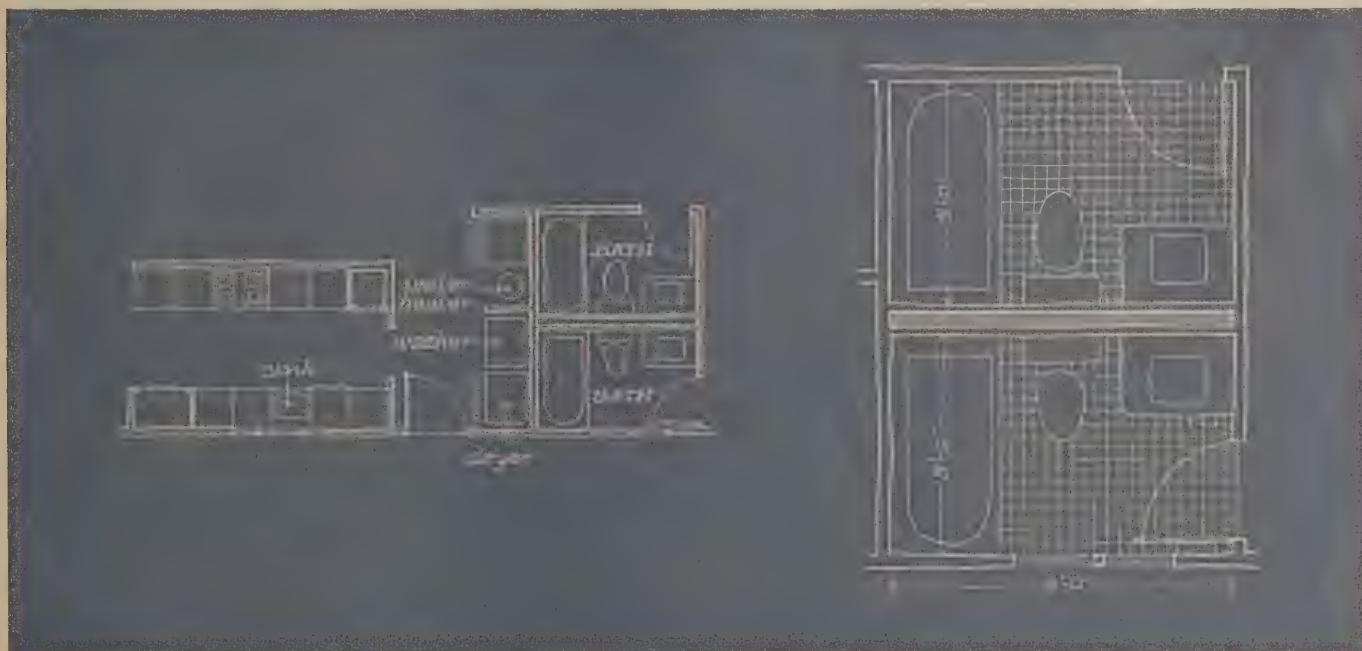
## 2. Buy your wet wall plumbing prefabricated

Your plumber can buy it factory-assembled to meet your local code requirements and all framed into the wall for less money than it would cost him to assemble it himself. He can buy it cheaper from APSCO, from LFI, and several other suppliers. Says Pensacola Builder John Collins, "Our plumber

is saving us \$75 per house by buying our plumbing pre-assembled." If your plumber won't do that . . .

## 3. Have your plumber prefabricate your wet wall plumbing in his shop

He can do it a lot cheaper there than he can do it in the field.



## 4. Plan your houses for short runs and compact plumbing

With the planning freedom you get from truss framing (see page 114) there is no good reason why your architect cannot develop a good plan that will keep all your plumbing close together for two baths, sink, washer-dryer, and water heater.

## 5. Line up your fixtures along one wall

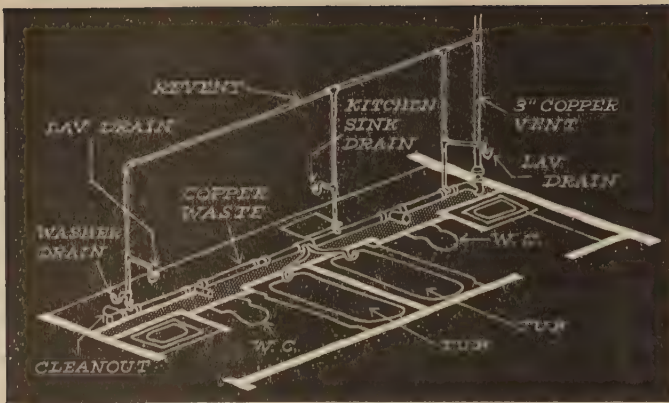
Only an amateur or a millionaire would do anything else.

## 6. Put your bathrooms back to back

This should cut the rough plumbing costs for your second bath by more than 50%. It will give you shorter runs and let your plumber use cross-fittings to handle two fixtures from a single riser. (APSCO charges only 20% more for a double plumbing wall for two baths than for a single plumbing wall for a single bath.)

Back-to-back baths are easier to plan now that FHA permits inside baths. One inside bath has been approved since 1954; two inside baths are approved by the new FHA standards.

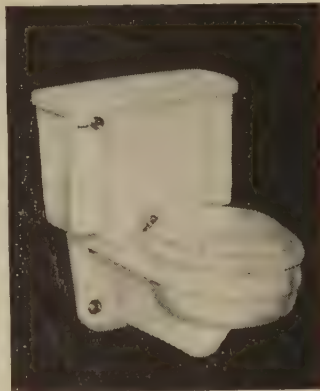
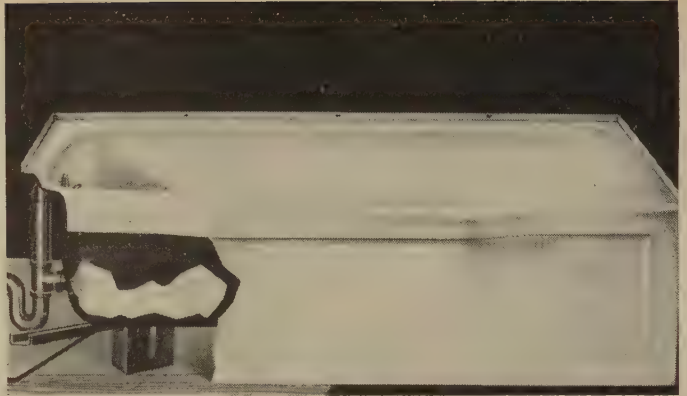




### 7. Keep your plumbing above the floor

Your plumber can work a lot better and faster there than he can work flat on his back in crawl space or on a ladder in the basement; he can do all his roughing-in the same day for a slab or crawl space house; and he can save the extra cost of burying an extra-expensive soil line under a slab. Builder Bob Schmitt figures his net saving on above-the-floor plumbing at \$300 per house, even after paying \$50 extra for two wall-hung toilets.

For above-the-floor plumbing you need an end-drain tub (see picture right) and a rear-discharge toilet, either pedestal-mounted (which costs little more than standard toilets) or wall-hung (which costs about 50% more).

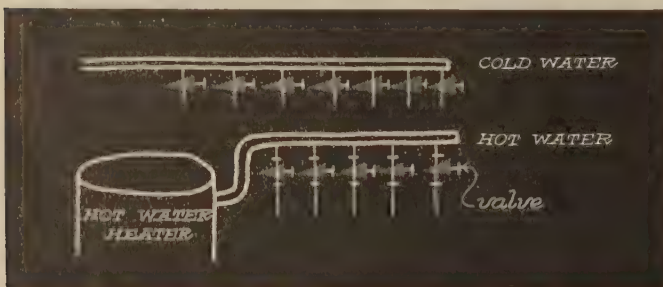


### 8. Don't make your plumber do carpenter's work

Don't make him waste time cutting and notching studs to fit his rough plumbing in. Let him finish his rough plumbing first; then close the rough plumbing in between a double wall (the extra framing lumber will cost you only \$3, and your carpenters can nail it together faster than your plumber can cut one pipe through a stud.) Never make the wet wall a bearing wall.

### 9. Use flexible tubing for your supply lines

Copper will save its cost twice over by requiring less fittings for bends; new plastic tubing will soon be on the market that will carry hot water as well as cold for a third the material price per foot of copper. (The NAHB Research Institute is using plastic pipes in its Knoxville research house, now being built.)



### 10. Connect all your fixtures to a water-supply manifold . . .

. . . one for the hot water system next to the heater, one for the cold. Then your plumber can run a separate  $\frac{3}{8}$ " flexible-tube from the manifold to each fixture. Except on long runs this will save material; it will always save the plumbers' time, because each fixture needs only two easy connections—one at the fixture, one at the manifold.

New to most plumbers, this system is nonetheless approved by all up-to-date codes. In use it offers a further advantage in that there is much less pressure drop when another fixture is turned on.

### 11. Protect your tubs during construction

On some tracts two out of every hundred tubs have to be taken out and replaced before the house is finished because of some careless accident like dropping a hammer. This often costs \$150 per tub. Builder Fritz Burns pays \$3 a tub for a sprayed-on plastic cocoon. "If you can't use moth-balling," adds Builder Dave Slipper, "the second best idea is to fill the tub with water as soon as it is connected."

Be sure your plumber plugs all drains when they are installed, so construction debris can't block the system.

### 12. Let your plumber schedule for just two trips

One day for the rough plumbing before the partitions go in, one day for the fixtures and finished plumbing after the partitions are erected.



### 13. Buy only the best and best looking fixtures

Many builders who waste hundreds of dollars on inefficient rough plumbing hidden in the wall skimp to save \$2 by putting a cheap undersized fixture out where it will show. This is without doubt the most penny wise, pound foolish of all economies. Fixtures are the least expensive part of a bath; even the best fixtures add up to only a third of its total cost.

So don't buy a lavatory too small to wash in (19" x 21" costs your plumber only \$5 more than 17" x 17"). Insist on a long-lipped elongated toilet bowl (it costs your plumber only \$10 more, would cost much less if more builders bought them).



#### 14. Don't use oversized or overweight pipes

Use 3" drainage pipe; it is more than adequate and passes all up-to-date codes. It costs only half as much to buy as 4" and is much easier to install.

Use service weight cast-iron pipe. Buy above ground copper tubing only in the DWV weight; it is just as satisfactory as the M that went out 15 years ago.

But don't skimp on undersized supply lines. Run at least a 1" line to the street. In plastic it will probably cost less than the smaller service you use. Use nothing smaller than 1" between your meter and your manifold. The sizes most builders use are too small for today's much heavier water use, so they are noisy and wear out at their bends.

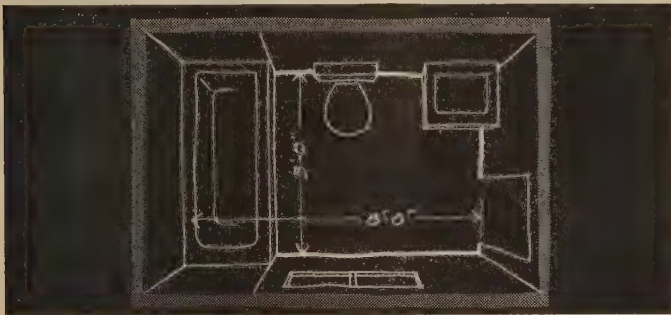
#### 15. Use only two stop and waste valves

In all but the most elaborate layouts all you need is one for the cold water line and one for the hot.

#### 16. Take advantage of new alternate materials

Plastic tubing is just as good for the service line from the main to the house. It can be unreeled in the trench like a hose, costs very much less per foot.

Plastic and impregnated fibres are quite okay and much cheaper for connections to sewer lines and septic tanks (except under the slab). They are also quite okay and much cheaper for above-the-water-line venting (from 30" above the floor to the roof).



#### 17. Set your tub wall-to-wall across one end of the bathroom

And buy the tub enclosure ceiling high in one piece.

#### 18. Don't try to beat the 5' x 8' bath for economy

Use standard 32" c to c spacing for the fixtures; it lets you buy standardized rough plumbing. It is also an outstanding example of the multi-use of space: the same 2½' x 5½' of floor does triple duty as standing room for three fixtures.

#### 19. Don't waste time, space, and money compartmenting your baths

What home buyers want and need is more fixtures, and fixtures are the cheapest part of the bath.

When you compartment a bath you run up your partition costs and you often double your rough plumbing costs (because you lose most of your back-to-back plumbing savings), but you end up with no more fixtures to show for your money.

#### 20. Locate your toilet between tub and lavatory

This is about \$30 cheaper, for it is the only way to branch without any back venting or wet venting.

#### 21. Use single-lever combination faucets

They take less time to install.

#### 22. Use frost-proof hose bibs

Instead of running a separate water line with a stop and waste valve to each hose bib, run a short line from the nearest fixture supply to a frost-proof hose bib. You will need less pipe and less valves.

#### 23. Try to vent your whole plumbing system on one stack

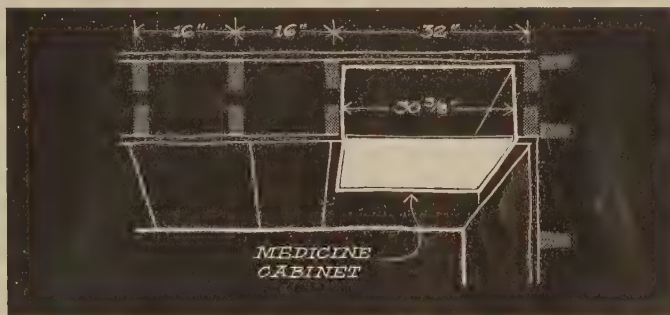
If you can group all your fixtures within an 8' radius, a single stack will meet the requirements of the National Plumbing Code and all other up-to-date codes. Additional stacks will cost at least \$25 each (but don't accept a bad plan just to save this \$25).

#### 24. Run the window wall to wall

A wall-to-wall window across the 5' end of a bath should cost less than a narrower window with a fussy return on either side. Builder Joe Eichler has proven beyond doubt that eliminating the return makes a small bath seem much bigger.

#### 25. Or perhaps you can just omit the window

Many of the best architects often do—like Marcel Breuer or Frank Lloyd Wright. You can get better ventilation rain or shine for less money with a small exhaust fan blowing out under the eaves.



#### 26. Buy your recessed medicine cabinets 30⅜" wide

Then they will fit between the studs without blocking.

#### 27. Cover the ceiling with paper-backed aluminum foil

This is one of the best new ideas introduced by National Homes this fall. It costs only about 00¢ a sq ft printed in attractive patterns and provides a waterproof covering that will outlast many coats of paint in a steamy bath.

#### 28. Locate your water heater as close to the kitchen and bath as possible

This will save piping and it will help your buyer save fuel and water getting the water to run hot.

#### 29. Don't waste good money on a house trap

If your plumbing code requires a "horizontal intercepting trap," get after your local government to change this archaic requirement at once. Says Glen Shields, sanitary engineer for the City of Detroit: "They are stinkers. When a water closet is flushed they emit a blast of sewer air that would make a sewer rat homesick. Research by the Bureau of Standards and the University of Iowa showed that a house trap develops the same kind of obstruction to flow as if the discharge end of the building sewer were submerged. Its omission permits better flow, fewer stoppages, and higher loading."



# Don't spend good money on anything less than a good kitchen

Advice No. 25

*This article was written in collaboration with Glenn T Beyer, Director of Cornell's Housing Research Center, and head of the Cornell Kitchen Study.*

A bad kitchen costs just as much money as a good one. The woman who buys your house may not understand electronics or thermodynamics, but unless she is a very green bride she will know at a glance whether she will like the kitchen you offer her—whether it will be a pleasant place to work in and an easy place to work in, and whether it is conveniently located so she can answer the door, watch the children, and enjoy her guests. “The kitchen sells the house” is a truism.

**Here are 16 recommendations based on the Cornell Kitchen Study:**



**1.** Put the kitchen handy to the garage. Don't make the housewife carry the food clear across the house every time she comes home from market.

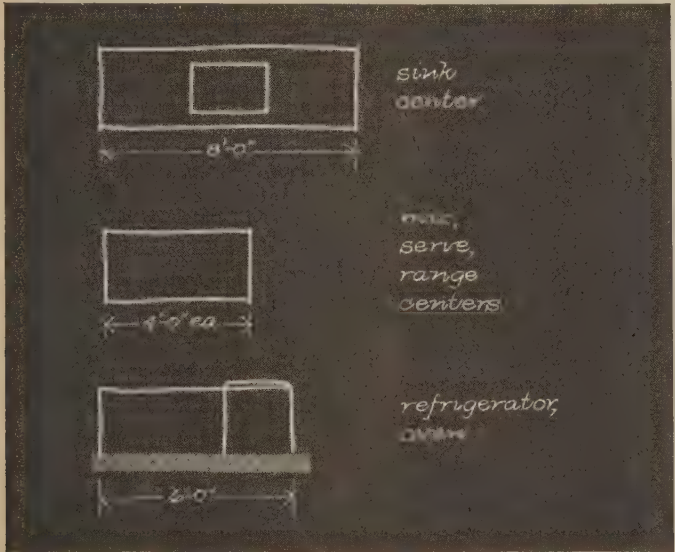
**2.** Put the kitchen handy to the front door. Don't make her drop her work and walk half the length of the house to answer the bell.

**3.** Put the kitchen where the housewife can keep an eye on the children at play. "It's the most important place for the kitchen," says Glenn Beyer.

**4.** Don't make the kitchen a prison. Open it up so she can see and talk to her husband and her guests while she works. Or make it big enough—a real kitchen-family room—so she can have company right in the kitchen itself.

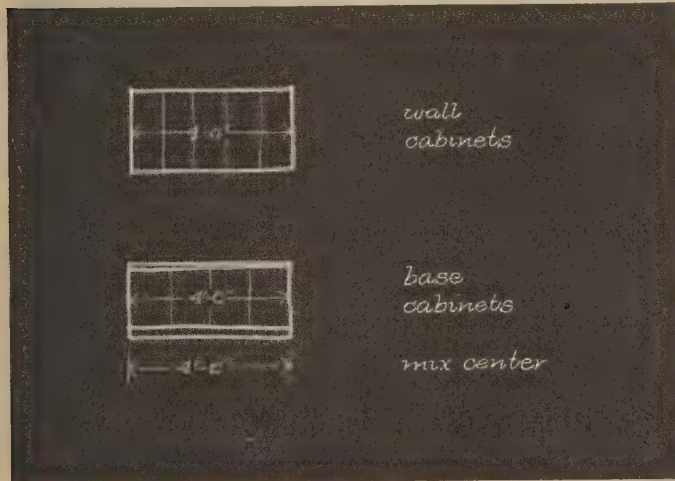


5. Don't make the kitchen smaller than 8'x12'. You won't have enough counter space, you won't have any room for informal eating (and most families like to eat their regular meals in the kitchen), and you won't even have a place for the housewife to sit down.
6. Don't make the work space in your kitchen much bigger than 8'x12'. The added floor space will just put counters and appliances farther apart and so make more steps for the housewife.
7. Install an acoustic ceiling. The kitchen is the noisiest room in the house. You can't get rid of china dishes or metal pans, so make it as quiet as you can with acoustic tile.
8. Put the exhaust fan 24" above the range and be sure to vent the oven right under the hood. The kitchen is the hottest room in the house—and the smelliest.
9. In an open kitchen, provide some sort of shutters or sliding panels between the work area and the family area so the kitchen can be closed off at times to hide the mess.



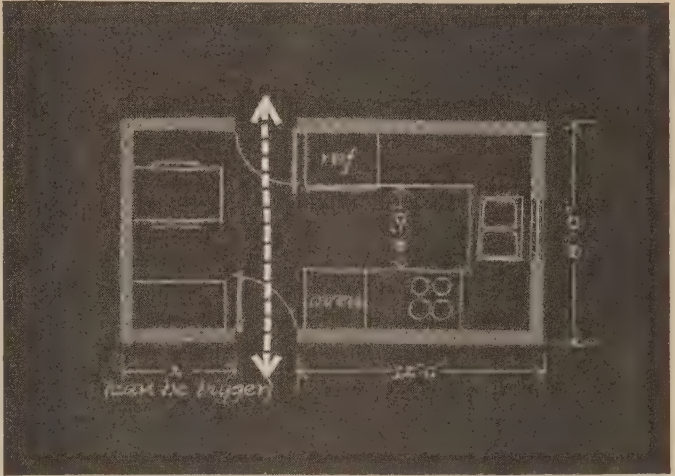
10. Plan your kitchen around these five work centers: refrigerator, sink, mix, range, and serve—and allow this much wall space for each: sink, 8'; mix, range, and serve, each 4'; refrigerator-oven, 6'.

Some of the counter top space for some of these centers can do double duty, so the total wall space needed can be condensed from 26' to 20' if necessary. All countertops should be 36" high except the mix center, which should be 32".

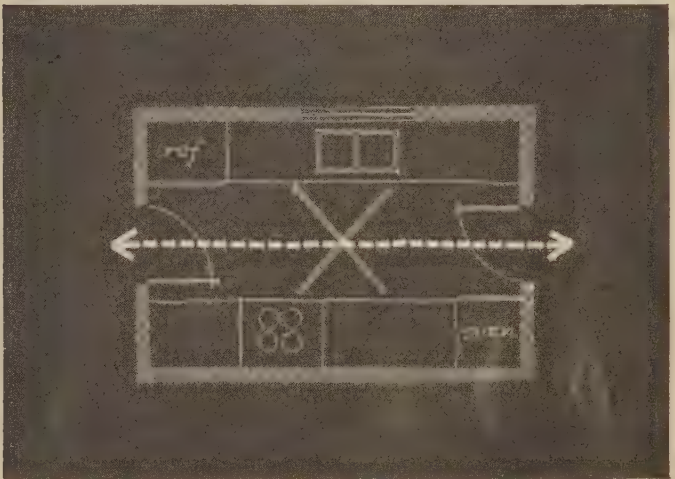


11. Provide the same length of top and bottom storage at each center for the things used there. For example, your mix center is 4' long, so make the base and wall cabinets each 4' long too.

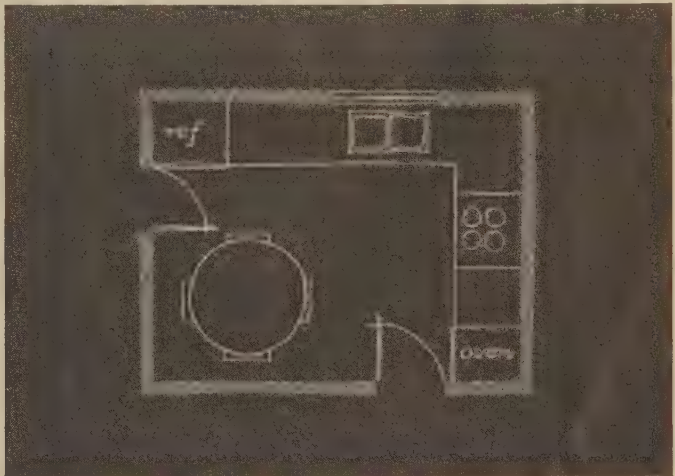
12. Place the refrigerator, sink, and range in a triangle, to save steps. There are three good kitchen plans. Which one you use depends on the room you're working with.



There's the U-shaped kitchen. This keeps the triangle compact and also keeps through traffic out of the work area.



There's the corridor-kitchen, with two facing rows of cabinets and appliances. The triangle is still compact, but through traffic may be a nuisance.



And there's the L-shaped kitchen. Cross traffic is not a problem, but the triangle is bigger and takes more steps.

Worst plan you can use is the in-line kitchen. It strings all the appliances and cabinets out in one long row, wastes space and adds steps.

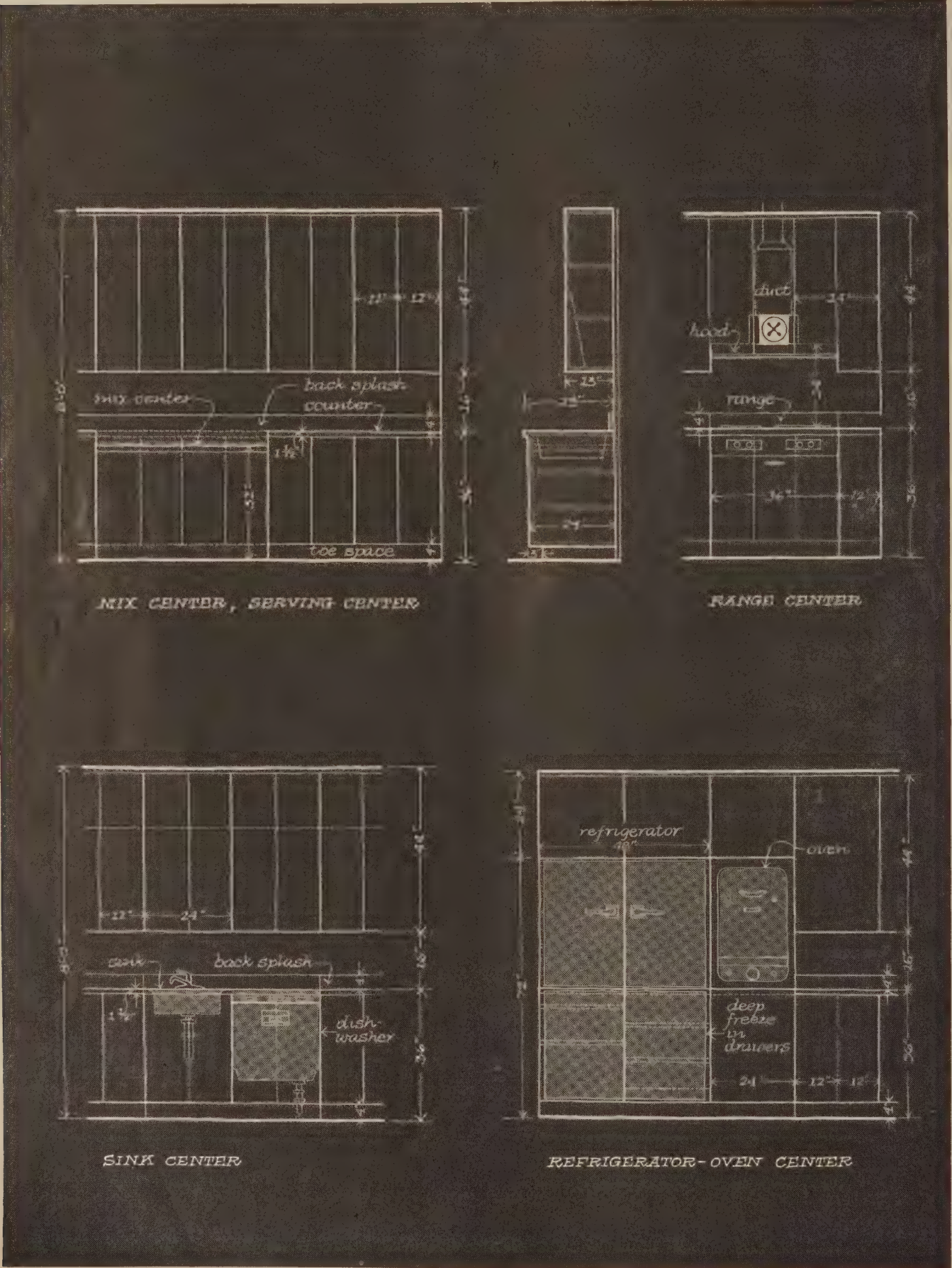
13. Put a good light under the wall cabinets to shine on the work surfaces, which need at least 40 ft-candles. This can be the least expensive light in the house, for all the fixture you need is a baffle along the cabinet edge to keep the light out of the housewife's eyes.



**14.** Provide intermediate shelves. Too many storage cabinets have only three shelves, set 12" from shelf to shelf. That wastes most of the height, for you need only 6" to 8" to stack a dozen plates. Intermediate shelving will give you more and more convenient shelf space.

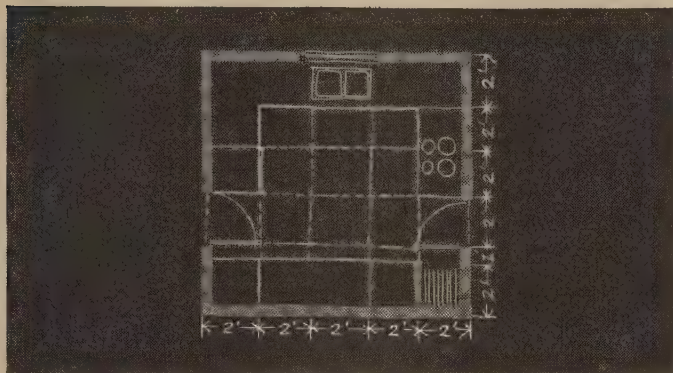
**15.** Put facing counters and appliances at least 4' apart. This allows just about minimum clearance when the oven door is down or the dishwasher is pulled out. And you need at least 4' clearance for two people in the kitchen at the same time.

**16.** Use these standard cabinet dimensions:

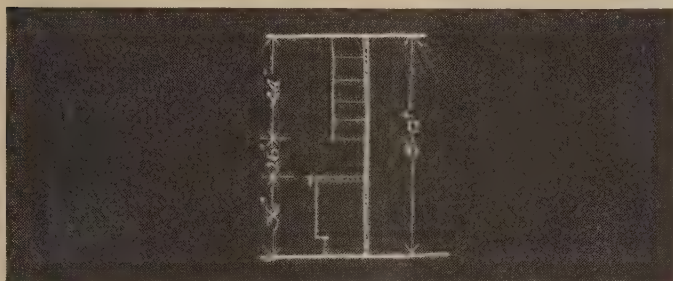




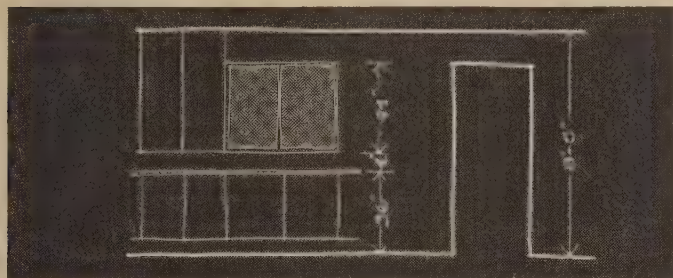
## Here are nine ways to cut the cost of a good kitchen



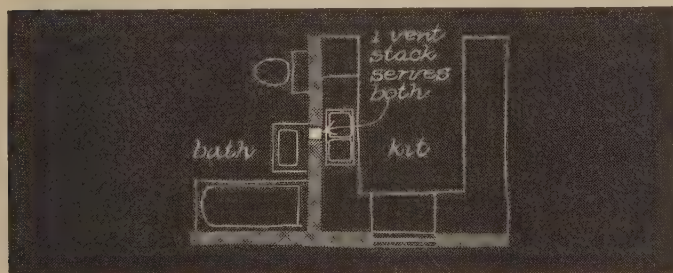
**1.** Dimension the space for your built-ins to the even 2' module and the even 1' half-module jointly recommended by NAHB and NEMA. Then your built-ins will run wall-to-wall with minimum time and money wasted to make them fit. Says Savannah Builder Clayton Powell, "This is a big advantage when you buy manufactured units."



**2.** Run your storage cabinets ceiling-high. "It costs less to put tall doors on your cabinets, so the top can do double duty as enclosed storage for little-used items, than it costs to fur down the ceiling," says Houston Builder Mickey Norman. Says Glenn Beyer, director of the Cornell Kitchen Study: "Top storage for seldom used items is fine so long as you provide enough convenience-level storage for items in common use." Asks Architect Morgan Yost: Where else can you put those awful old wedding presents?"

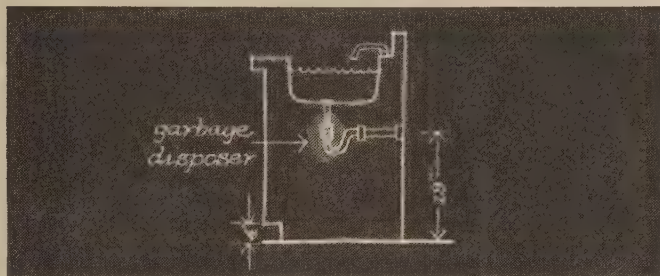


**3.** Buy your kitchen windows 44" high, to line up at the top with the 84" height of other openings, to fit at the bottom right over the counter splashback 40" above the floor.

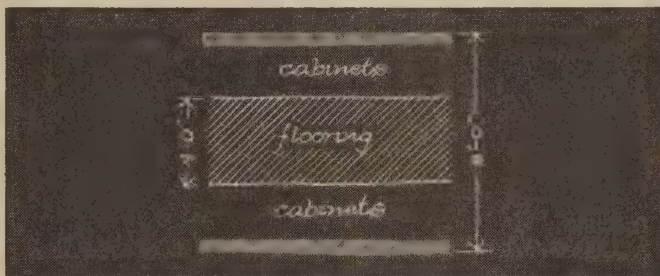


**4.** Back the sink up to the baths, to cut your plumbing costs by using the same wet wall. Don't knock yourself out to put the sink under the window. Women used to want it there so they could look out while they washed the dishes, but Glenn Beyer says, "That is not so important now that dishes

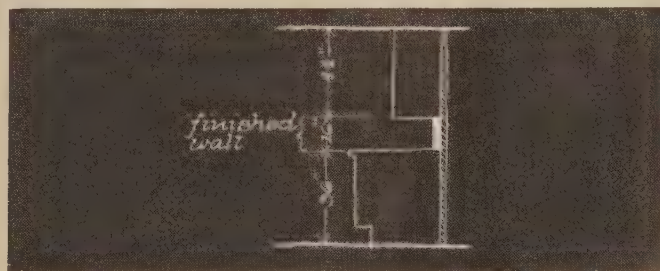
are washed by machine: The dishwasher doesn't care about the view, so it is often better as well as cheaper to put the sink on the side wall and put the eating space or the mix center under the window." *Caution:* Don't back up the sink to the baths if you have to use a bad plan to do it, or you'll lose your dollar savings in wasted space, wasted materials, and lost buyer goodwill.



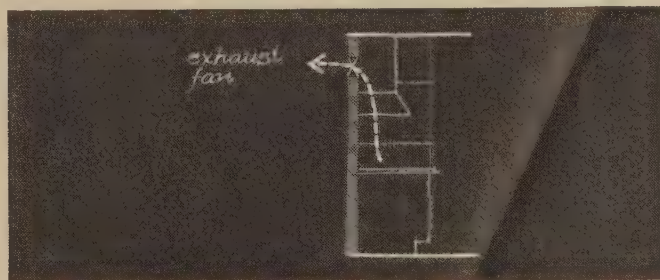
**5.** Set the sink trap 19" above the floor. That will allow space to install a garbage disposer, now or later.



**6.** Don't waste good resilient flooring under your base cabinets. Spend the money thus saved for a rubber cushion under vinyl asbestos flooring; the women who buy your houses will bless you every evening for the ease and rest the cushion will give their feet. And nothing less than vinyl asbestos will stand up under kitchen wear (heaviest in the house) plus kitchen grease and water.



**7.** "Don't waste money finishing the wall and ceiling behind your ceiling-high wall cabinets or your base cabinets," advises Sacramento Builder James Lewis. When cabinets fit wall to wall and floor to ceiling, all you need finish is the 16" between countertop and wall cabinets.



**8.** Locate your range and oven on the outside wall. That will cut the installation cost of an exhaust fan at least 50%.

**9.** Wire your appliances at countertop level. It will make a savings in your wiring—see page 148d.





H&H Staff

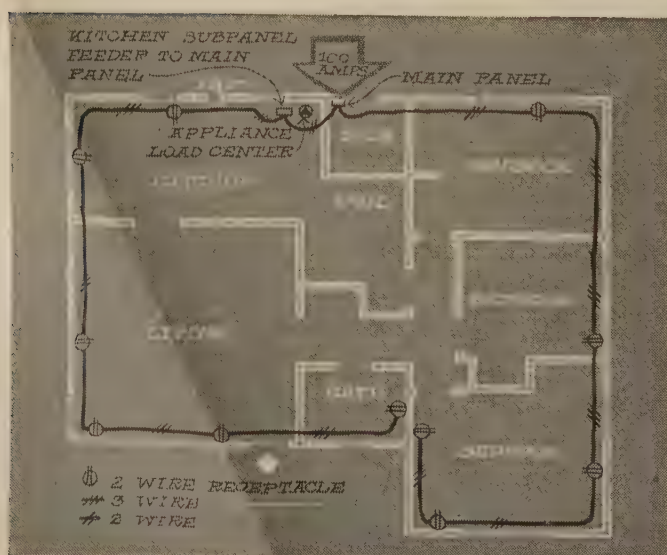
Advice No. 26

## Here are 20 ways to cut your costs for adequate wiring

*These 20 recommendations were developed in collaboration with Charles P. Bobe, electrical contractor and Chairman of the Research and Education Committee of the National Electric Contractors Association. However, they are not necessarily the opinions of NECA.*

Don't let your electrician waste his time and your money. Many builders could get adequate wiring (100 amp entry or better) for little more than they now pay for inadequate wiring (60 amp).

Don't let your electrician bid a flat price per outlet. Find an electrician who will work with you to detail a more economical wiring method and share his savings on this more efficient system with you.



### 1. Use less and heavier wire

A three-wire #12 circuit takes little if any more labor to install than the usual two-wire #14, but it carries nearly three times as much electricity (40 amps vs 15), so you need 60% less circuits and a lot less running feet of wire. Two three-wire #12 circuits will carry all the current most 1480 sq ft houses need outside the kitchen-utility area—with the added advantage of making 220-volt service available wherever it is needed (for example: to plug in a room cooler).

### 2. Get your circuits out of the ceiling

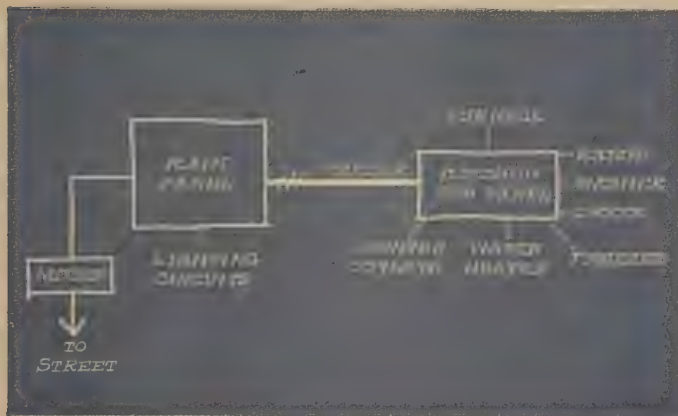
Nearly 80% of your living area outlets are down near the floor, so the most expensive place to run your wiring is through the ceiling, where you have to waste 8' of wire to drop down 8' to each base plug. The sensible place for your circuits is at baseboard level, making a split loop right around your house. Run a tap off the loop or a small (two-wire #12) separate circuit for your ceiling lights and interior base plugs. Use #14 wire only for switching.





### 3. Insist on pressure-lock devices

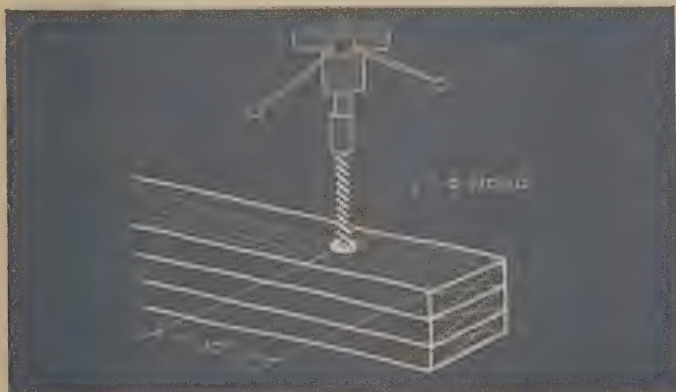
The old-fashioned screw-type devices are as obsolete as kerosene lamps, but nine electricians out of ten still waste time using them. Pressure-lock (push-in) connections can be made in one-fifth the time—and time means money when you are paying your electrician \$3.70 an hour for his time and wasting at least half of it. Good pressure-lock devices cost no more than screw-type devices of equal quality.



### 4. Keep your heavy-wire circuits short

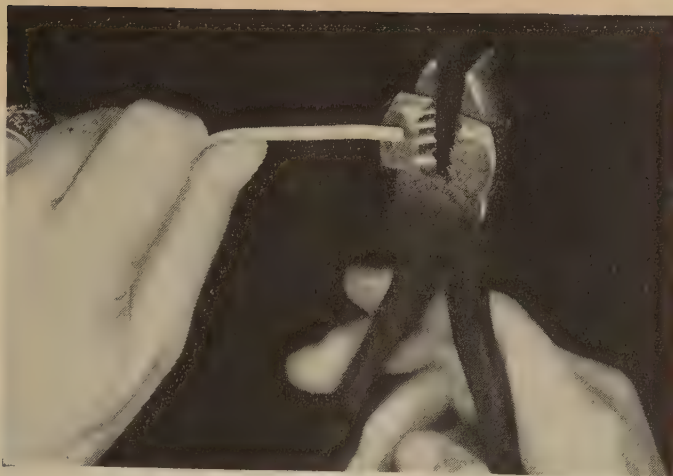
Run a three-wire #4 feeder to a rear load center if your kitchen-utility area is in the back of the house away from your service entry. (Three-wire #6 is enough if you are sure cooking will never be electrical). This will permit short branch circuits. At trade prices, 20' of three-wire #4 costs the electrician less than \$8; an 8-circuit sub-panel costs him about \$11.50.

*Today not one rear kitchen house in 100 takes advantage of this wiring economy.*

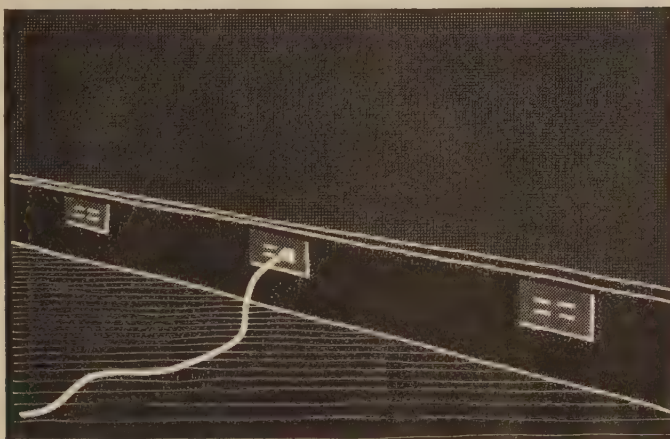


### 5. Buy your studs predrilled with a 1" hole 10" up from the bottom

Bigger and better holes can be drilled much faster in the shop, and your electrician can run his wire through a 1" hole faster and easier than he can run it through a 1/4" hole.



### 6. Cut and strip your wires simultaneously with this new combination tool



### 7. Get your interior partition wiring out of the wall

Surface raceways are the cheapest way to provide outlets in non-bearing partitions erected after the perimeter walls are finished (as they should be—see page 110). Reason: They can be installed and inspected at the same time as the finished wiring for the perimeter ring, whereas branches run through the partition studs would require an extra call from the electrician and an extra inspection.

Baseboard wiring (like Wiremold, Plugmold or Electrostrip) should cost no more if your electrician knows how to install it, uses the right tools to make corners fast, and gives you the benefit of his labor saving to offset his higher material cost. Even if your electrician's bid for baseboard wiring is a bit higher, it will cost you less if it eliminates inspection delays before you can finish interior partitions.



### 8. Use only non-metallic sheathed cable

It costs at least 15% less installed than armored cable or old fashioned knob-and-tube and it will save you a lot more than 15% under flexible conduit or rigid conduit. It is just as safe. It is approved by the National Electrical Code and all but the most archaic or racket-ridden local codes.



**9. Make sure your appliances, furnace, etc, come factory wired for a single electrical connection**

**10. Give your buyers a break with a 150 amp entry box and a # 2/0 wire service drop**

The 150 amp steel cabinet costs your electrician less than \$1 more than a 60 amp cabinet; the wire costs him less than \$10 more than the #6 wire too often used. These two extras will save your buyer many times their cost the first time he adds a heavy-demand appliance.



**11. Wire your appliances at counter-top level**

No. 6 wire costs too much to waste it running up to the ceiling and down again.

For built-in kitchens the splash-board should be designed to do double-duty as a surface raceway big enough to hold several heavy wires. If this is not available, second choice is a separate surface raceway (trade price 41¢ a ft). Third choice is to run the wire through the studs 40" above the floor.

**12. Put your outlets near the end of a wall space**

They are less likely to be blocked behind furniture there.

**13. Use aluminum for wires heavier than #6**

For equal current-carrying capacity it costs only a quarter as much for the metal required.

**14. Use only duplex or triplex base plugs**

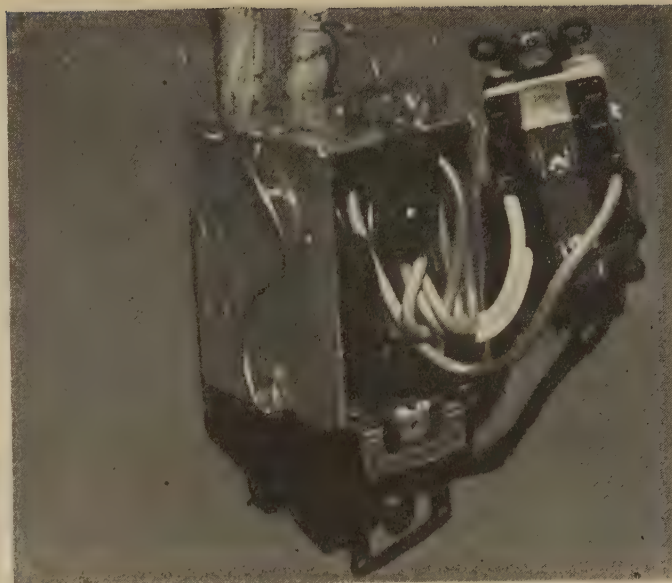
They actually cost less than single outlets.



**15. Use a split-bus distribution panel**

This will take five major appliance branch circuits and feeders off ahead of the main lighting disconnect. It saves money in three ways:

1. The split-bus costs less than any other device that can handle today's heavier loads (up to five heavy appliance branch circuits and ten single-pole general purpose branch circuits).
2. It ends the need for a single main switch or circuit breaker, saving its entire cost (which may be anywhere from \$6 to \$60.)
3. It is easier to make all the connections in one box.



**16. Use outlet boxes slightly oversized**

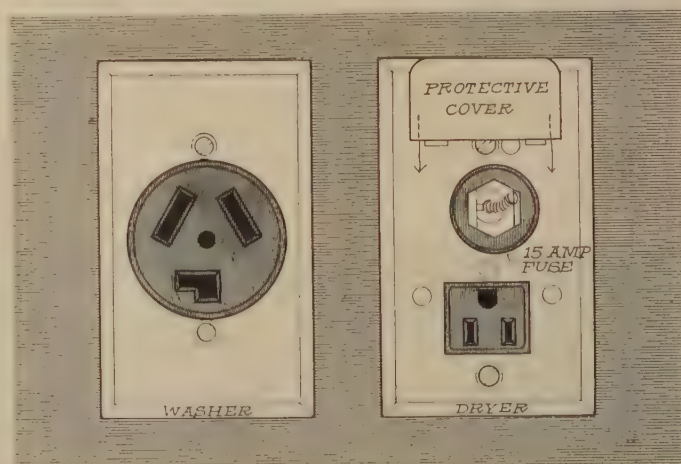
Don't let your electrician waste time cramming three No. 12 wires into a small box like this. The box shown above is 2½" deep. A box 3½" deep could have been wired much faster.

**17. Don't let your electrician use "competitive" grade devices**

Competitive receptacles cost only 9¢ less to buy (13¢ vs 22¢). They cost more to install (because they come only in the obsolete screw-type model). They won't stand up as long in service, because they don't make as good a contact. And it costs at least \$2 for a service call-back to replace one.

**18. Put time-delay fuses on all motor-appliance circuits**

They cost only 5¢ more, and they will take without blowing the twice-as-heavy starting current of the motor.



**19. Put your washer and dryer on the same circuit**

Run a 3-wire #10 circuit (capacity 7200 watts) to the dryer and tap this circuit for a 2-wire No. 12 through a 15-amp fuse or breaker for the washer. The dryer uses 4500 watts; the washer only 700.

**20. Make sure your electrician uses a ratchet screwdriver . . .**

So one motion will do the work of ten..Few electricians do—though even with pressure lock devices they have hundreds of screws to tighten.



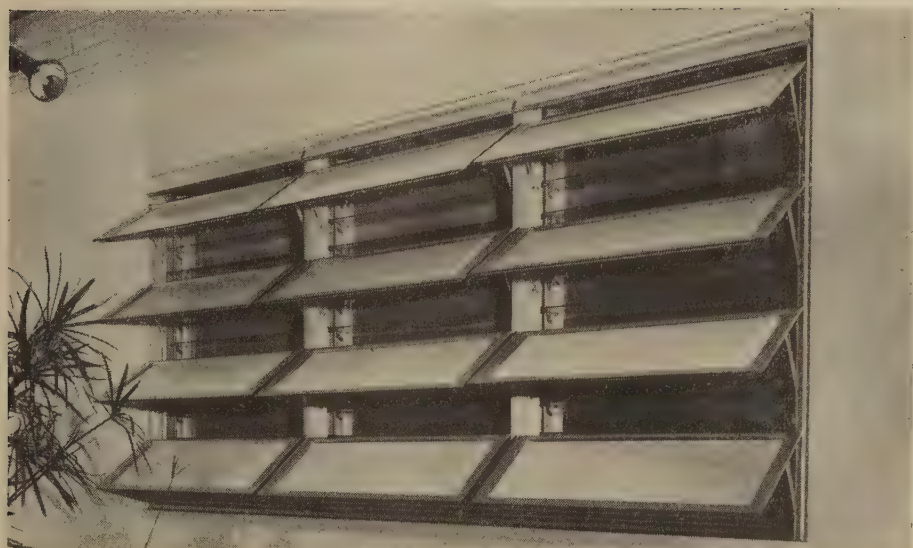
Be sure to see

# NEW WAYS TO BUILD BETTER

A monthly report on home building ideas, products, and techniques

Starting here

## New products

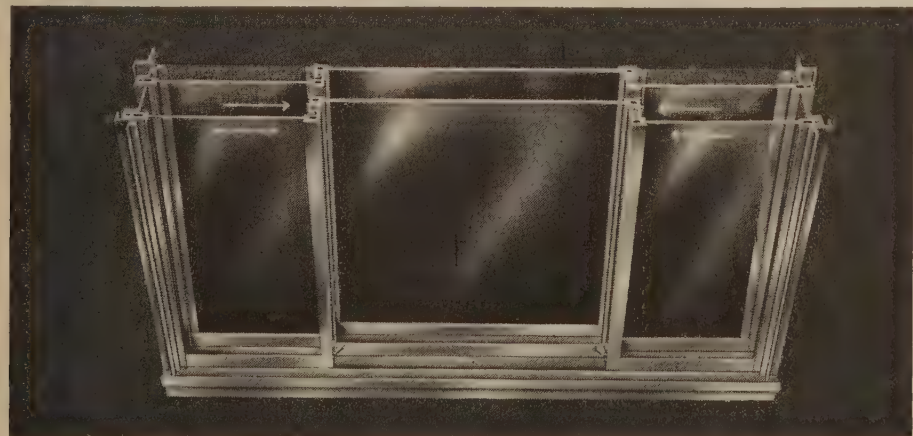


**Awning + jalousie** makes a year-round window of the Rusco Twin Window. Awning serves as sunshade or storm window, jalousie as interior window. Awnings are glass or reinforced

fiberglass in pale yellow, aquamarine, or off white. Screens are self-storing. Aluminum frame conceals hardware.

F C Russell Co, Columbiana, Ohio.

For details, check no. 1 on coupon, p 214



**Double sliding windows** combine with picture windows in sizes to 12' x 5'1" for winter protection and summer ventilation. Glass mounts in vinyl channel in weatherstripped aluminum

sash. Sash moves on nylon slide. Fiberglass screens are permanently installed. All elements remove easily.

Fleet of America, Inc, Buffalo.

For details, check no. 2 on coupon, p 214

And on the following pages

## Technology

A look ahead at a new method of heating and cooling electrically . . .

page 164

## What the leaders are doing

A 4-bedroom house for \$13,100 . . .  
Let trees help you sell . . .  
Route your prospects past a school . . .  
Harnischfeger adds a 1½-story . . .  
Profit from a non-profit nursery . . .

page 166

## Publications

Why and where to use latex paints . . .  
How to use asbestos-cement sheets . . .  
Wiring low-voltage systems . . .  
Complete guide to wood cabinetry . . .  
Technical data on heavy equipment . . .

page 202

More

## New products

New floor and wall coverings . . .  
Barbecues for inside and out . . .  
Prefinished wallboards . . .  
New fixtures for bath and shower . . .  
All-purpose prefab shelving . . .

page 172





Curtis single-pane Silentite casement units—also available in many other sash styles

## Individuality...easier to

Profit-wise builders have found the key to more home sales. The answer is *individuality*—making each home look different, avoiding “look-alikes.” To help you do this, Curtis gives you a choice of 97 different wood window styles, types and combinations!

These smart, ready-to-install window units provide the look of fine craftsmanship...the warmth and charm of wood...guaranteed quality...plus a lifetime of operating ease.

Your Sweet's Catalog will brief you on Curtis window superiority and show you other window styles: removable sash, sliding and awning types—Curtis makes them all. Your Curtis dealer stand ready to help you choose from a big window selector chart. Additional information about Curtis windows, doors and woodwork is yours for the asking!





Curtis Silentite double-hung units used here with Curtis picture window—one of many styles.

achieve with Curtis wood windows

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Please send literature on Curtis windows, doors and other  
Curtis Woodwork.

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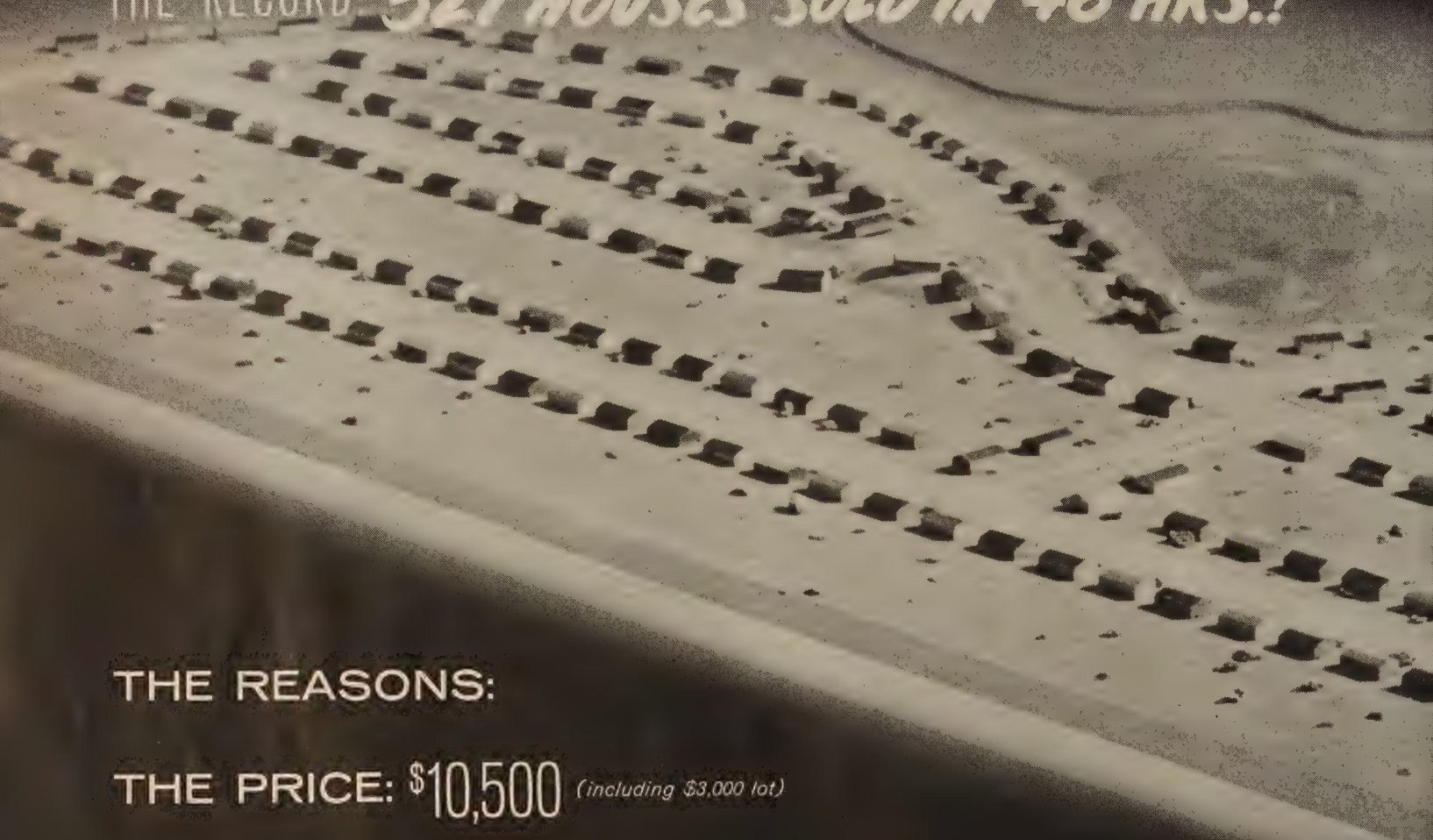


# HOW SCHOLZ NORTH AMERICAN HOMES

SCENE SHOWN: DOVER HOMES, FERNWAY, PITTSBURGH

THE HOUSE: 4 BEDROOMS • 2 BATHS • 1200 SQ. FT.

THE RECORD: **327 HOUSES SOLD IN 48 HRS.!**



THE REASONS:

THE PRICE: \$10,500 *(including \$3,000 lot)*

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*This selling program is being followed by a building schedule equally amazing. Starting May 15 — 4 houses a day, rising to 8 houses a day by July 15. Scheduled project completion, October 15.*

**327 HOUSES IN 5 MONTHS!**

*... a great contributing factor to the \$7 per sq. ft. building cost.*

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**NOW! SERVING BUILDERS EVERYWHERE FROM COAST TO COAST**

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Scholz Homes Inc., 2001 N. Westwood, Toledo 7, Ohio, Phone FR 1601

Please forward a copy of the new SCHOLZ DESIGN COLLECTION and have your field representative call on me to explain the Scholz Project Participation Program.

BUILDER'S NAME (please print)

ADDRESS (please print)

CITY STATE PHONE NO.



# Buyers perk up —to aluminum's *bolder, broader use!*

Today, prospects want aluminum. They've come to expect it in windows, doors and hardware.

But watch how they react when you boldly go a step or two further . . . when you use aluminum in really new ways, limited only by tasteful restraint, buyer appeal and the properties of the metal, itself.

Take this architect's design. It shows how fresh, new aluminum applications can help give a house added interest and buyer appeal. Such ideas—similar only in newness, function and beauty—can make the next home you design more distinctive, more exciting, more salable.

Important, too, is the immediacy of new aluminum designs. For virtually any practical application you conceive can be made to your design specifications by a fabricator of aluminum products. Why not take advantage of his knowledge of alloy properties and fabricating methods? He welcomes your call.

Today, many of the aluminum building products you use are made by leading aluminum fabricators who do not smelt their own primary ingot. Many of these firms rely on Aluminium Limited for performance-tested, high-quality alloys backed by the basic and practical research of this leading North American producer.

## Aluminium Limited

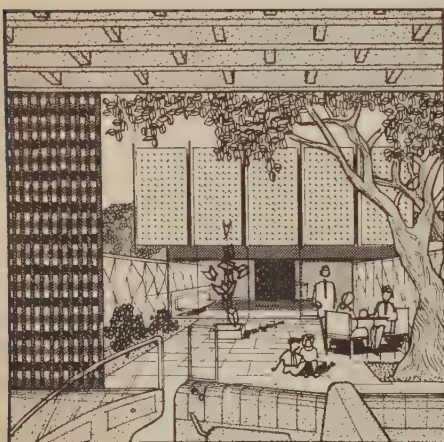
...serving American Aluminum Fabricators

*In the U.S.—Aluminium Limited Sales, Inc.*

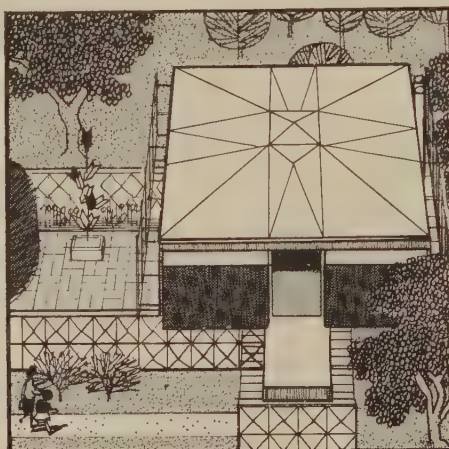
NEW YORK • CLEVELAND • CHICAGO • LOS ANGELES • DETROIT • ATLANTA



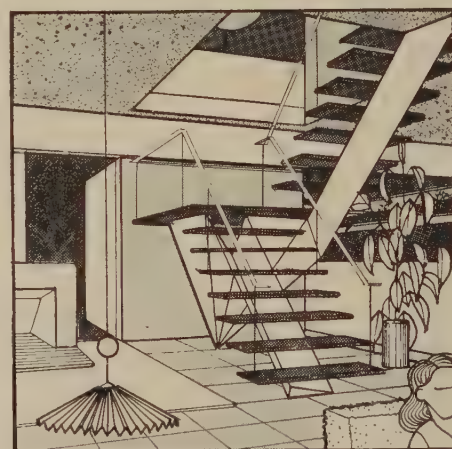
Make your next design a custom showpiece—with exciting ideas like these.



**New screen design** lets occupants look out, no one looks in—adding privacy to vision . . . reflects sun's heat. Conceived as a single, low-cost sheet of aluminum, die-cut in a pleasing rhythm. Bent to the horizontal, die-cuts would add greater rigidity, provide interesting interplay of color and light.

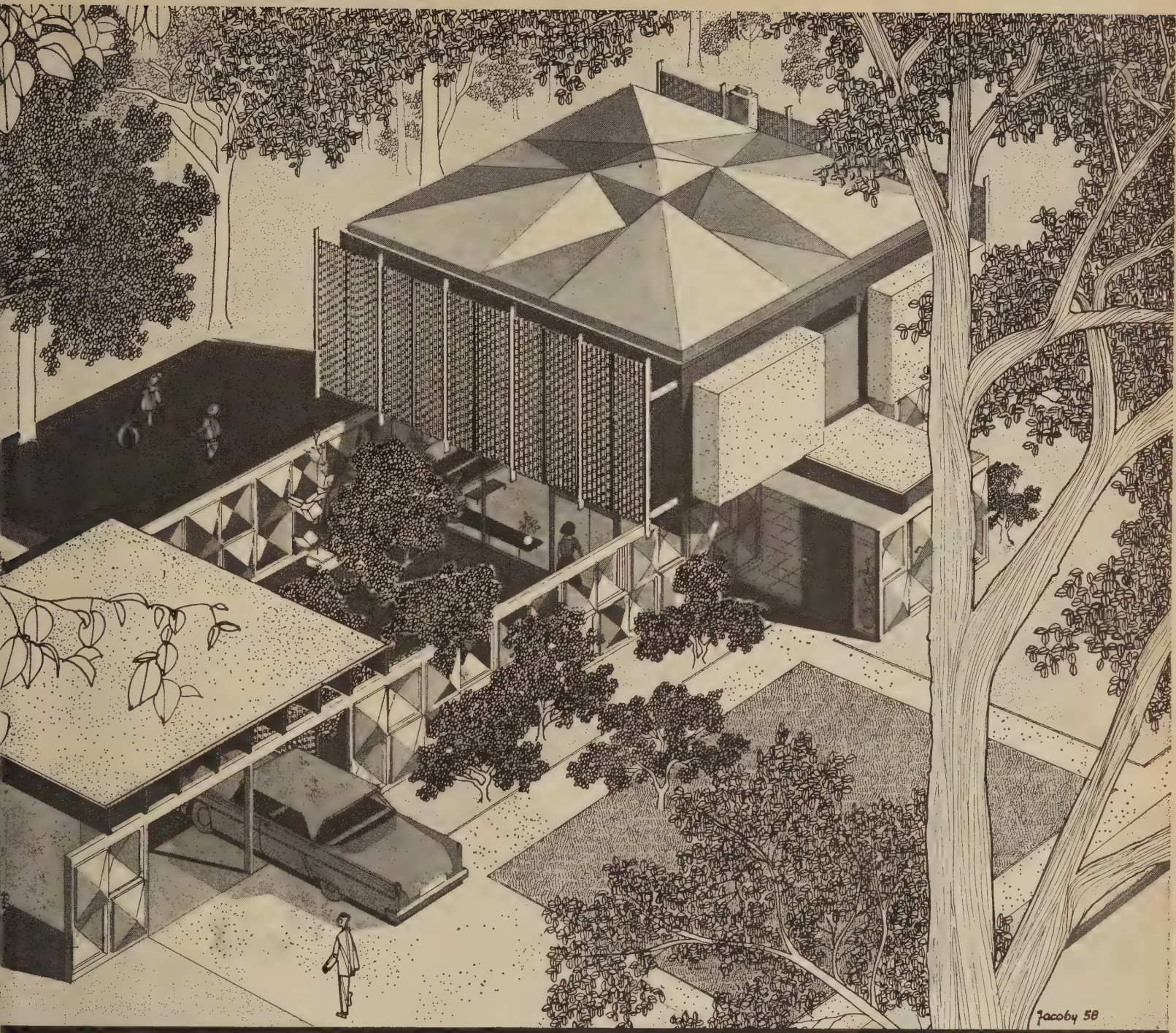


**Panel-type roof** of this kind would combine high structural strength with unusual appearance. Adds distinction to the building's exterior design . . . forms a strikingly attractive ceiling in each of four bedrooms. Entire roof could be aluminum . . . fabricated of new insulated sandwich panels.



**Interior stairs** leading to bedrooms above might consist of an aluminum railing system that would act as a truss to support the treads (which may be of wood or other material). The result: a staircase treatment that is refreshingly open . . . with enlargement of living area that is both optical and actual.

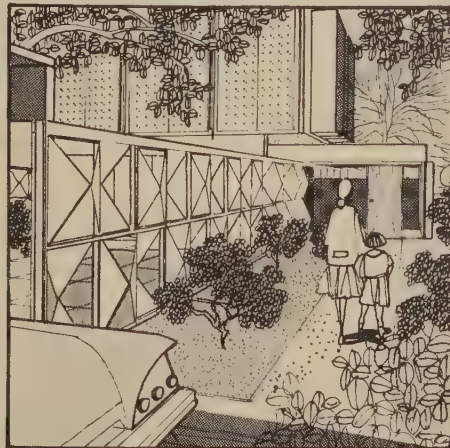




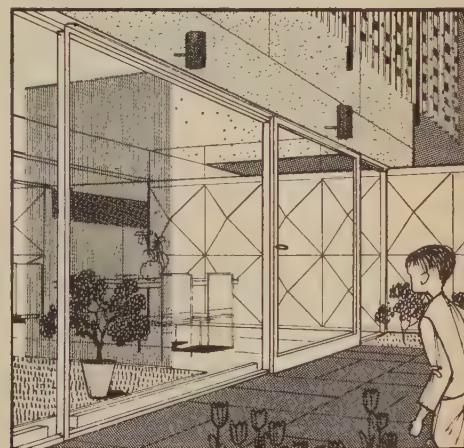
The model shown is the result of our search for new aluminum applications . . . where the metal offers an edge in both performance and merchandising value. Now in drawing-board form, the ideas it contains will be explored in detail in forthcoming advertisement reports.



**Sculptured** in anodized aluminum is the colorful outdoor fountain. With good design and playful purpose, it would provide a low-cost point of interest to the patio. Many textures and colors make aluminum the ideal building material for today's newest decorative applications.



**Here, the architect has** conceived load-bearing walls of studs and aluminum panels, extended to enclose carport and patio . . . provide privacy, wind protection and a restricted space. Non-bearing part of the wall could be perforated or some panels omitted as the individual situation may require.



**Few materials can match** aluminum's merchandising value. Buyers know its lasting advantages. No better reason for featuring aluminum—in sliding doors . . . trim . . . kitchen built-ins—wherever brightwork means improved appearance with minimum cleaning and upkeep.



# You, Mr. Home Builder, for 6,000 critical

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**Will you be guilty of skimping on heating installations?**

**It could cause serious harm to your business reputation...your profit picture!**

The heating unit in every home you sell must—in the average climate—operate perfectly for 6,000 critical hours during the heating season ahead. If anything “acts up” to cause drafts, discomforts, “cold spots,” faulty heat distribution—remember, *you’re the man* who’ll be held responsible. The man who’ll have to answer the complaints . . . lose time and money—and, even more serious, risk the loss of good will.

How to avoid these unpleasant and costly experiences?  
*Make sure that each heating installation is handled properly.  
No skimping, no half measures.*

*Make sure your heating unit is top-quality throughout.*

In short, make sure your entire heating job is handled by a Lennox Comfort Craftsman. A man who’s trained by Lennox engineers in expert planning, installing and servicing. A man who can deliver *all* the com-



# will face this "jury" hours this winter!



fort that Lennox equipment is built to provide. A man who works directly with the factory to meet your most exacting needs, with the world's most complete line of heating and air conditioning equipment. You'll find his name in the Yellow Pages of your directory. Call him.

## **LENNOX**

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**Need merchandising ideas** to help you sell homes? Ask your Lennox Comfort Craftsman about the dynamic Lennox Merchandising Program—planned and tailored to individual needs and market.

See Sweet's for product facts; or, for complete information about the Lennox Merchandising Programs, write Lennox, Dept. HH89, Marshalltown, Iowa.



# The Ballad of Builder Dan

*Or How Zone Control Warms Up Houses and Prospects!*

Home builder, Dan, with loving care  
Built homes which had a "gracious air":  
Split-levels; ranches (spread out, too)  
With picture windows and a view.  
His troubles came not from his plan.  
Poor heating put the heat on Dan.



New owners screamed, "The basement's nice  
But winter makes it cold as ice.  
And the extra room we wanted so  
Would freeze out any Eskimo."  
Dan heard complaints till he heard tell  
Of Zone Control by Honeywell.

Now, Dan's homes are his city's pride  
They're lovely and they're warm inside.  
Dan says, "Good friends, this word I pass:  
To give your houses extra class,  
Get Zone Control—that's what to do.  
For heating and for cooling, too."



*Ask your heating and air conditioning contractor  
about Honeywell Zone Control especially for  
these 6 problem areas.*

1. Finished basements. 2. Split-level homes. 3. Rooms over unheated areas. 4. Large concentrated glass areas. 5. Spread out floor plan. 6. Living and sleeping areas. There's a Honeywell Zone Control System adaptable to all types of installations—all types of homes. (In many instances, zoning comfort can be achieved more economically with multiple heating-cooling units!) For further information about this extra selling feature for your homes, contact your contractor or the Honeywell branch nearest you.

## Honeywell

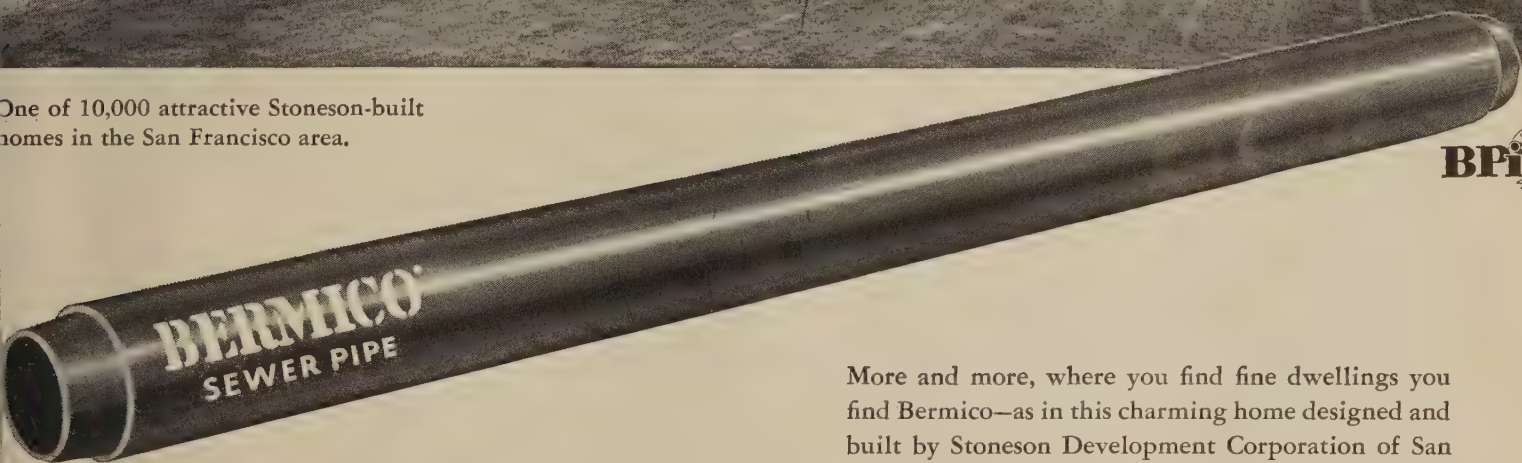


*First in Control*





One of 10,000 attractive Stoneson-built homes in the San Francisco area.



For a blue ribbon winner

# BERMICO®

The modern pipe for modern living

More and more, where you find fine dwellings you find Bermico—as in this charming home designed and built by Stoneson Development Corporation of San Francisco. It won a Saturday Evening Post Blue Ribbon Award for the quality of its brand-name materials.

Bermico is tough cellulose fibre, thoroughly impregnated with coal tar pitch, that is naturally waterproof, root-proof and resistant to acids and alkalis. Convenient 8-foot lengths make Bermico easy to lay. Joints are quickly sealed with a few hammer taps.

For lasting service, use or specify *Bermico® Sewer Pipe* for house-to-septic tank and sewer connections, storm drains, down-spouts runoffs—*Bermiseptic® Perforated Pipe* for septic tank disposal beds—and *Bermi-drain®* for foundation drainage.

Send for free copies of our 50¢ booklets—"How and Where To Install A Septic Tank System" and "What Every Homeowner Should Know About Foundation Drainage." Address Dept. KB-9.

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*"my masons like*

# KEYWALL

GALVANIZED MASONRY JOINT REINFORCEMENT

*best"*

That's the conclusion of



The National Wax Company has 41,000 sq. ft. of floor space in its new headquarters in Skokie, Illinois. Ragnar-Benson engineers specified Keywall in every concrete masonry course outside and as a tie for the brick facing. Keywall was specified in every other course for interior walls.





When partition walls are to be built later, Keywall may be cut to extra length to serve as a wall tie. Then Keywall ends may be moved out of the way until needed. Smooth edges of Keywall won't cut or tear hands.



Note how readily Keywall adjusts to variation in brick and masonry courses. Here it serves as tie between brick and block.

**Joe Alberti, masonry superintendent,  
Ragnar Benson, Inc.,  
Chicago Engineers-Builders**

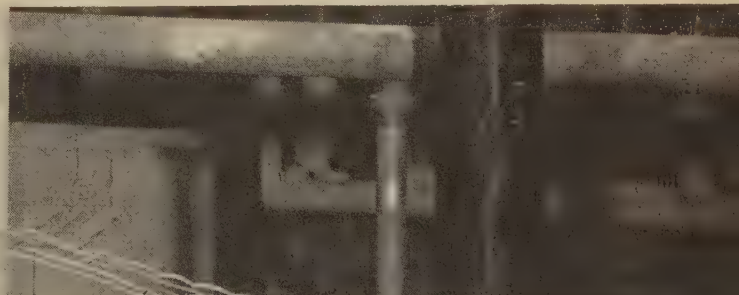
Mr. Alberti, as well as his masons, is enthusiastic about this new joint reinforcement. Ask one, Joe Wittye, for his opinion, "I'd use Keywall in my own home." Then ask Ragnar Benson designers, "We're specifying Keywall wherever masonry reinforcement is needed."

You get the same enthusiastic agreement whenever you go on a job where Keywall was used. Architects have seen its superior ability to reduce shrinkage cracks. Its design assures full embedment and strong bond. Masons prefer to use Keywall. They use it as specified. Keywall takes little space on the scaffold. Unrolls in place on the wall. Cuts easily. Installation is fast—without waste. No wonder that on job after job, builders are switching to Keywall.

## KEYSTONE STEEL & WIRE COMPANY

Peoria 7, Illinois

Keycorner • Keybead • Keymesh • Keywall • Welded Wire Fabric • Nails • Non-Climbable Fence

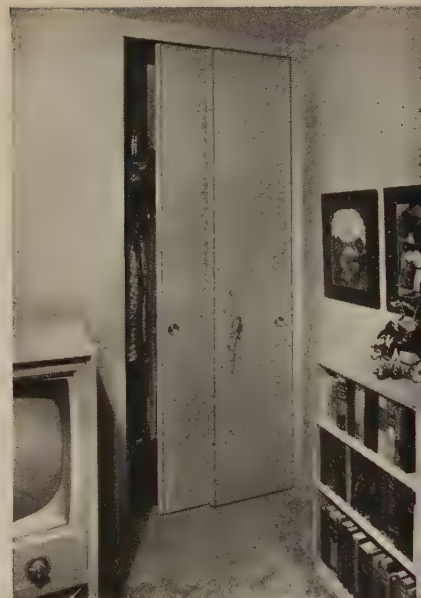


Keywall is easy to apply. You roll out only as much as needed, cut without waste. Lapping Keywall gives uninterrupted reinforcement without adding to thickness of mortar joints.





Double Wardrobe in this bedroom. Wall-to-wall. Floor-to-ceiling 8 feet high.



Saves room in this small den. Large corner closet, 8 feet high.

All Around the House

# GLIDE-ALL<sup>®</sup>

## *Sliding Doors*

**FOR MORE CLOSET SPACE  
THE SIMPLE, LOW-COST WAY!**



Simplifies door problem in entrance hall. Guest closet 6 ft. 8 in. high.

Photos:  
Hyland Manor CO-OP Apartments  
—By HYLAND BUILDERS CORP.,  
Chicago



Provides inexpensive storage area in playroom. Neat, decorative, ceiling high.

Home Builders agree that closet space...and more of it... SELLS HOMES as readily as any other single feature.

And the easiest, the least expensive and the most appealing way to add extra storage room and welcome wardrobe areas is with low cost Glide-All Sliding Doors.

**SAVE CONSTRUCTION COSTS . . .** there are Glide-All doors for buildings of every type: 8-ft. floor-to-ceiling or 6-ft. 8-in. standard heights.

**QUICK AND EASY TO INSTALL . . .** top track is simply mounted on ceiling with screws. Aluminum threshold is screwed to floor. Doors are positioned in upper track and engaged in the threshold.

**WOMEN ENTHUSE OVER THEIR DECORATIVE POSSIBILITIES . . .** Glide-All doors are available with flush or recessed panels, can be painted, papered, lacquered, varnished or waxed in natural finish.

Write today for new, low price schedules and specifications bulletin.

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## FOUNDATIONS AND BACK-UP

*Feature-packed block* is ideal for foundations and back-up. Here's why: Extreme durability. Minimum of moisture absorption. Full protection against vermin and rodents. Block even acts as its own insulator—providing indoor comfort for warm winters and cool summers. Fire-safe, too!



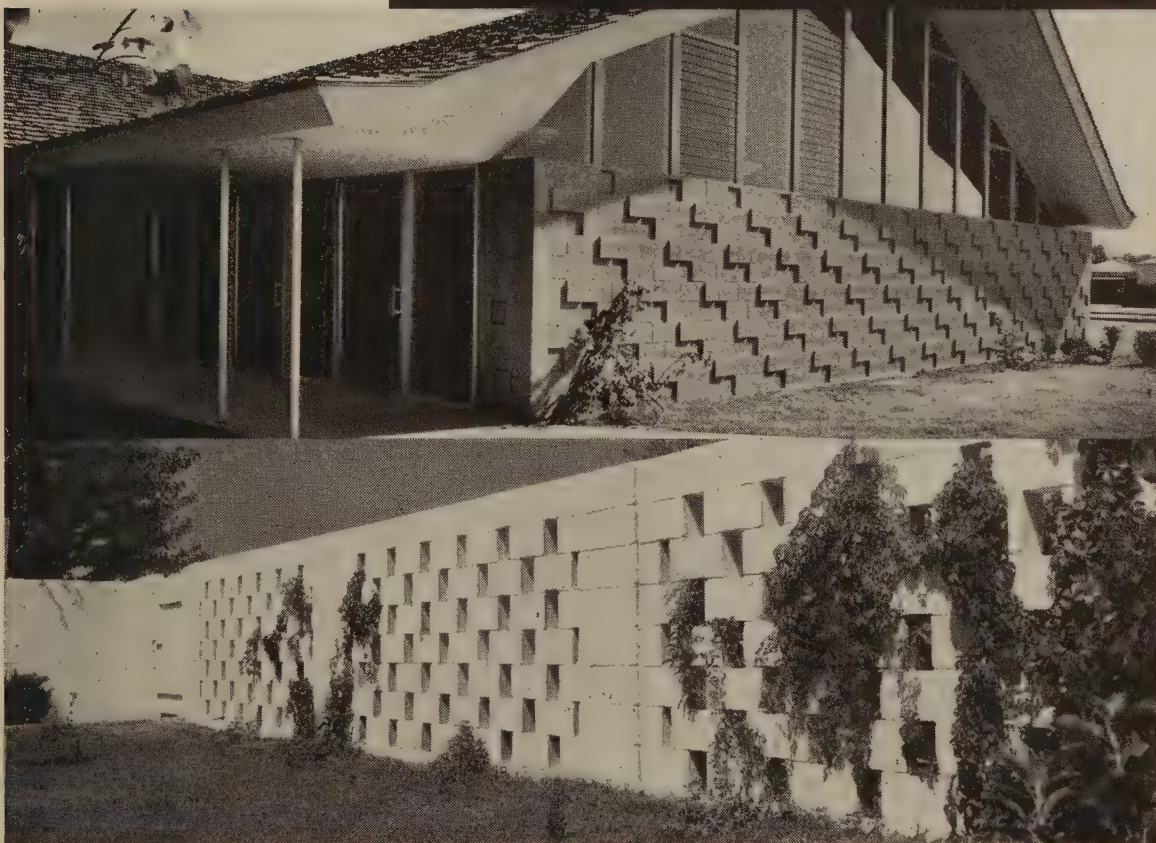
# BLOCK

begins and ends with Quality

With block go permanence, dignity and economy—modern day musts for smart homes, shops, schools, churches, industrial and municipal buildings. Low initial and in-place costs of block are

marked contrasts to other leading construction materials. Block is available everywhere for prompt delivery. Consult your local NCMA member on any phase of modern block construction.

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## EXTERIOR AND INTERIOR WALLS

*Economical block* requires almost no maintenance... age can only enhance its natural beauty. Block's versatility offers a myriad of personalized wall patterns, all fashioned in distinctive good taste. Further, block is fast and easy to lay up.

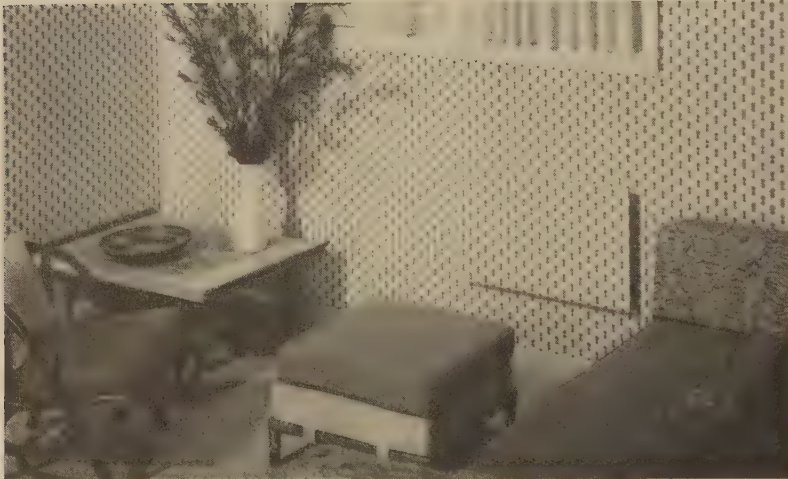
## SPECIAL ACCENTS

*Boundless block*—inexhaustible in its utility—builds attractive windbreaking fences to withstand severest weather conditions, builds handsome patios matching the rugged activity of outdoor living... privacy partitions... carports... you name it, you can build it with concrete masonry.

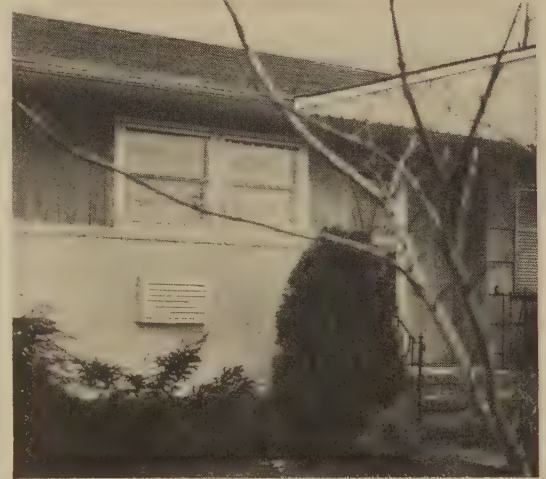


# Air Conditioning Designed for Builders...

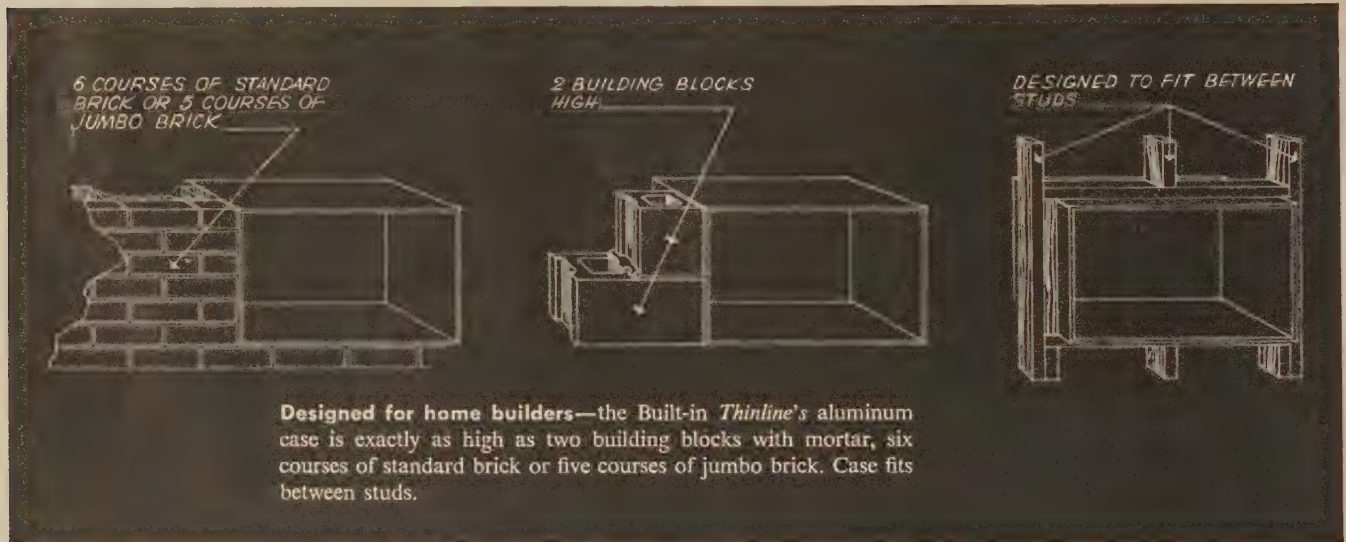
## New General Electric



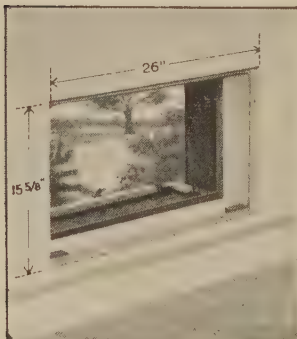
**INSIDE**, the new General Electric Built-in *Thinline* is covered with a panel that can be painted or papered to match interior decoration. It *blends* in with room décor! Controls are hidden away from view, yet are easy to reach when needed.



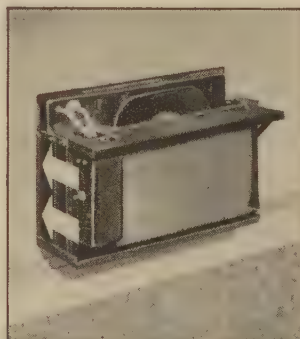
**OUTSIDE**, the Built-in *Thinline* has a "no see through" aluminum grille. It can be painted to match exterior. From street, it has a neat, Built-in look.



See how easy it is to install the new General Electric Built-in Thinline:



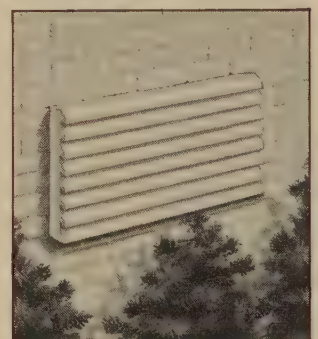
Your workmen install case during construction. Inside and outside panels protect the case until building is finished.



Slide the unit into the case later. It's compact and easy to handle, thanks to exclusive Spine-Fin cooling system and new compressor.



Add the inside panel, connect it and the new Built-in *Thinline* is ready to run. So neat you'd hardly notice it's in the room.



Outside louvers can be painted to match exterior. Makes the new General Electric Built-in *Thinline* blend with the finished house.



# to cut on-site costs, save space!

## Built-in Thinline

**Cuts on-site costs** because it needs no special ductwork or plumbing. Takes up no space because it's part of the wall. Lets you air condition zone by zone—as little or as much of the house as you want. General Electric's new Built-in Thinline Air Conditioner blends gracefully with any home design—inside and out.

**D**ON'T DECIDE on any air conditioning system for the homes you build until you've seen the newest system of them all—the new General Electric Built-in *Thinline*. Consider its many advantages . . .

**Cuts on-site costs**—You don't need a skilled workman to install it. You not only save those hours of skilled and high-paid work by specialists, but you also save the cost of duct and plumbing materials. Its aluminum case is *exactly* as high as two building blocks with mortar, six courses of standard brick or five courses of jumbo brick.

**Takes up no space** because it's *part of the wall!* The louvered grille can be painted to match the house exterior. And you hardly know it's inside the room, because the inside panel can be painted or papered to match the décor. It fits almost flush inside and out.

**Flexible—you can air condition zone by zone**—because the new General Electric Built-in *Thinline* packs up to 10,000 BTU's\*—more than enough to cool a room in an average-sized house. A few can often take care of a whole house!

So you can air condition as little or as much as you want—and still have the sales appeal of air conditioning.

**Economical**—not only in labor and materials, but also in initial cost, too! And the new General Electric Built-in *Thinline* system costs less than most central systems.

Order now! Construction cases are ready for shipment right now. Your General Electric distributor has full details on the one air conditioning system designed specifically to answer builder needs.

General Electric Co., Appliance Park, Louisville 1, Kentucky.

\*Cooling capacities are tested and rated in compliance with ARI Standard 110-58 and are stated in British Thermal Units.

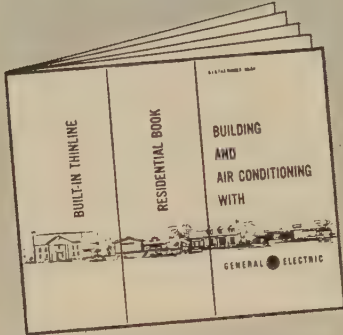
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Also send name of local distributor. ☐

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CITY \_\_\_\_\_ ZONE \_\_\_\_\_

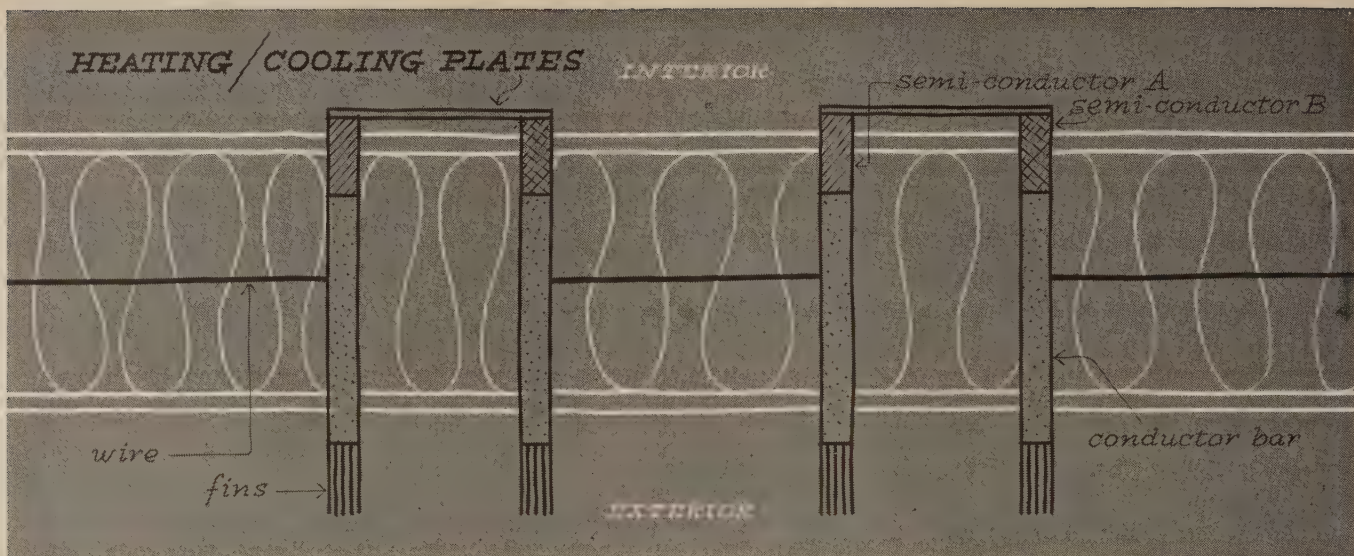
STATE \_\_\_\_\_

BUILDER \_\_\_\_\_ ☐

ARCHITECT \_\_\_\_\_ ☐

OTHER \_\_\_\_\_ ☐





**NEW HEATING/COOLING UNITS** would be arranged this way in wall (shown in plan). Details of operation in text below.

## A look ahead at a new kind of heating and cooling

Imagine a system that can heat and cool your house without any moving parts.

Imagine a system that is all-electric and uses a lot less electricity to deliver (or remove) a lot more Btu's per hour than any system used today.

Imagine a system that takes a fraction of the space needed by any system used now and can even fit within a 2" wall.

Using brand-new engineering and a century-old scientific principle, Westinghouse engineers have brought just such a system a big step closer to the market. The breakthrough comes in the form of a hostess cart and a baby bottle warmer—both experimental—just shown by Westinghouse.

The principle of these two units (plus room heater/air conditioners and other appliances to come) is a simple one. In 1834, Jean Charles Peltier discovered that if two wires of different metals were connected with two terminals (see 1 in drawing below) and a current were passed through the wires, one terminal would get hot and the other terminal would get cool. Reversing the current reversed the effect, heated and cooled the opposite terminals.

Westinghouse's new "thermoelectric heating/cooling" works just the same way. Engineers simply "straightened out" the circuit (see 2 in drawing), replaced the dissimilar metals with dissimilar semiconductors (which get hotter and

they extended the semiconductors with lengths of ordinary conductor (like copper) fitted with fins (see drawing above).

Here's how the system would heat or cool a room:

For cooling, d-c current would be run through the system in the direction that causes the interior plates to get cold, the exterior fins to get hot. Heat from the room would flow to the cold plates and, in effect, be transported by "electron flow" to the hot fins outside, where it would be blown away.

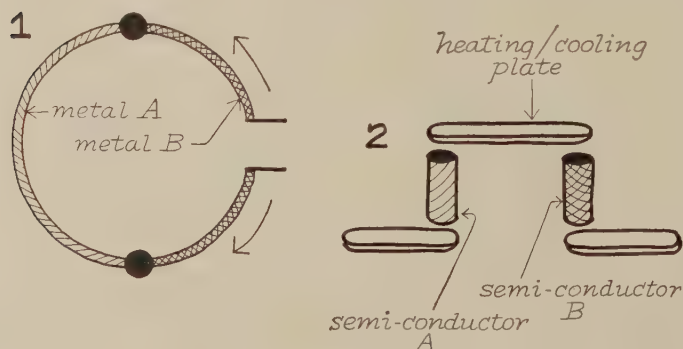
To heat a room, the current would be reversed, reversing the effect. Heat (this time from the cold outside air) would be transported in through the wall to the hot plates inside.

### What about the efficiency of this system?

It's good, will increase. Today, Westinghouse engineers say, thermoelectric systems cool more efficiently than a household refrigerator; heat more efficiently than resistance heaters or conventional air-to-air heat pumps at low temperatures. They will also operate effectively at lower outdoor temperatures than air-to-air heat pumps. Further, Westinghouse engineers point out, these and other conventional systems are now at close to top efficiency, whereas thermoelectric heating/cooling "is just getting started"—and they see no mechanical limit to efficiency of thermoelectric units.

The principle of operation is dramatized in the experimental hostess cart—the hot side of the unit (top, in photo) warms an oven, the cold side chills a refrigerator. The baby bottle warmer keeps the bottle cold until feeding time, then (by reversing the current) warms it. Engineers are working on many more products—refrigerators, freezers, ovens, room heaters/air conditioners and other "conventional" appliances that work on the new principle; other to-

tally new products like decentralized food cooling drawers that can be spaced around the kitchen, living room, and patio wherever they're needed, and cooling drawers for furs in the bedroom. Look for the first of these products to hit the market next year, says Westinghouse./END



colder than any known metals for the same electrical input), used plates instead of point connections to increase the area heated and/or cooled. To further increase the area, they connected units in series, and to accommodate the thickness of an insulating panel between the hot side and the cold side,







### For character and texture

... for delicacy and interest of grain pattern, for warmth and beauty of color, the architect and interior designer have learned to rely on California redwood. And for uniformly superior quality, they have learned to specify Certified Kiln Dried Redwood, identified by the trademark CRA, and milled to exacting standards by the member mills of the

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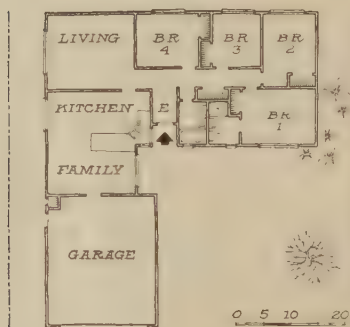


CALIFORNIA REDWOOD ASSOCIATION • 576 SACRAMENTO STREET • SAN FRANCISCO 11





**This four-bedroom model at \$13,100 sells fast for NAHB's president**

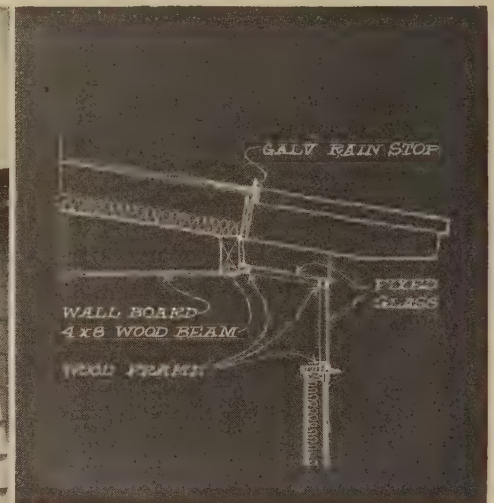
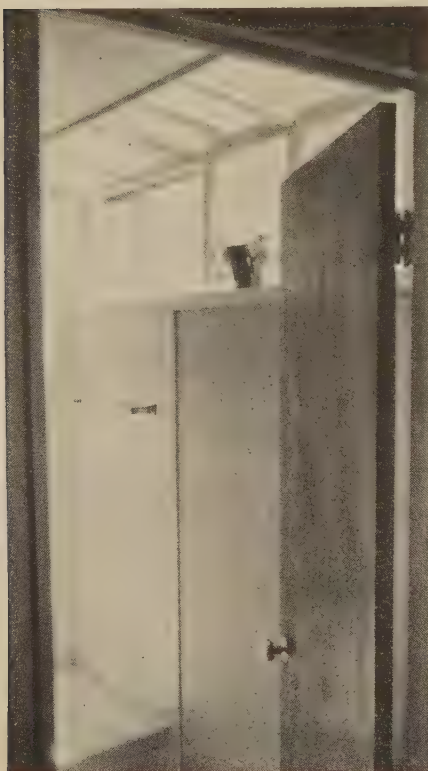


Nels Severin is finding that one sure way to boost sales is to offer more house for less money. For example, see above and left. This four-bedroom, two-bath, family-room house has 1,353 sq ft, sells for less than \$10 a sq ft with land.

It is one of four under \$10 a sq ft models built by Severin in association with Builder Jim Blackwell in Old Orchard, a 47-house development in San

Bernadino. The houses have been selling so fast that Severin has started another 51 houses in nearby Riverside.

The other three houses designed by Los Angeles Architect William Bray are a 1,281 sq ft, three-bedroom, family-room model at \$12,650; a 1,200 sq ft, three-bedroom plus den model at \$12,650; and a 1,128 sq ft three-bedroom model at \$11,650. All have two baths, center-hall entries, two-car garages.



**Here's one way to bring sun into a bathroom**

This combination of a skylight and a strip of windows high on the wall gives a bathroom plenty of daylight and still keeps it private.

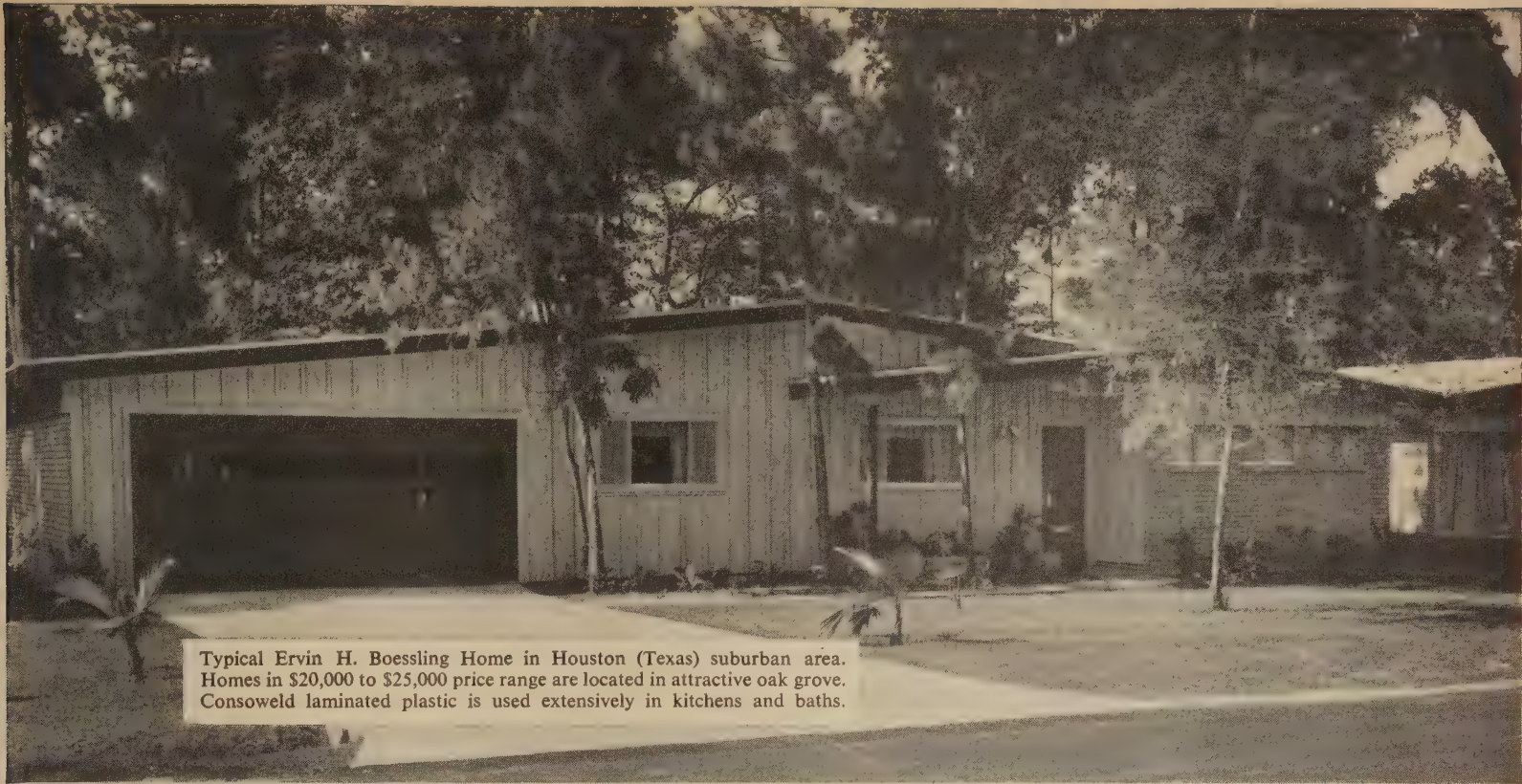
Fischer & Frichtel, St Louis builders, who tried the idea in one of their mod-

els, found buyers like it. Some buyers decorate the bathroom with plants along the window ledge.

The glass is fixed. A galvanized rain-stop (see sketch) keeps water from running down the roof onto the skylight.

*continued on p 168*





Typical Ervin H. Boessling Home in Houston (Texas) suburban area. Homes in \$20,000 to \$25,000 price range are located in attractive oak grove. Consoweld laminated plastic is used extensively in kitchens and baths.

## Houston builder sells more homes with Consoweld kitchens and baths



One glance at the colorful Consoweld kitchens of the Ervin H. Boessling Homes in Spring Branch, Texas, turned many "lookers" into "buyers." Plenty of room, and plenty of work space . . . all of it surfaced with bright, durable, functional, easy-cleaning Consoweld.

### **Luxury bath alone closed many a deal**

Marble-smooth Consoweld brings dramatic color and convenience to the shower stall—wipes clean instantly with a damp cloth. And the matching vanity provides ample surface area for toiletries; stands up

against stains, scratches, boiling water, alcohol, grease and cigarette burns.

### **Consoweld adds selling power to any home**

New or remodeled. Ease and speed of installation, variety of use, and the wide selection of styles and colors permit you to add sales-building individuality to every job . . . and at low cost! No small pieces to fall off. No mortar lines to clean. No call-backs. Complete customer satisfaction.

Learn how you can use Consoweld in your homes and commercial buildings. Use the coupon and send for the free Builder Information Kit.



**UPPER PHOTO:** Consoweld shower stall and vanity in bath will always look new, never need refinishing. Vanity is Consoweld 6 in *Marble* pattern to match shower stall. For shower walls like this, builders use Consoweld 10 (1/10" thick), which is applied directly over gypsum board without plywood undersurfacing.

**LOWER PHOTO:** Kitchen countertops and drainboards are surfaced with Consoweld 6 (1/16" thick) in the popular *Twinkle* pattern. Consoweld, distributed by Bakoring, Inc., was fabricated by the Lawrence Strauss Co.; both firms are in Houston.



**CONSOWELD CORPORATION, Wisconsin Rapids, Wis.  
Dept. HH-98**

Please send free: Builder Information Kit, information on Consoweld patterns and colors, name of my nearest supplier.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Please check: ☐ Builder ☐ Architect  
☐ Remodeler ☐ Other





### Let prospects see some good-sized trees when they first drive into your tract

The rear lots in Builder Burt Duenke's Harwood Hills subdivision (St Louis) are heavily wooded. But the front lots, near the entrance, are not.

Duenke knew prospects for his higher-priced (\$25,000 and up) houses on the rear lots were tree-conscious. He was a little worried that these prospects

would be disappointed when they drove through the unwooded front section (where houses had already been built and sold). So, at no cost to the owners, he lined the street leading into the subdivision (above) with 3 to 5 in. diameter trees. Says Duenke: "These trees help people to feel at home right away

—a good beginning for a sale."

To make sure the trees stay healthy, Duenke asks all buyers to: 1) build dikes around the base of each tree to keep water from running off; 2) mulch to a depth of 4" to 5"; 3) water weekly as soon as new foliage appears; 4) water twice weekly during hot months.



### Why it makes sense to run a non-profit nursery

Giving homeowners and their families a chance to browse and buy in a non-profit nursery is one way American Housing Guild gets landscaping in fast at its San Diego subdivision.

"By providing the most needed nursery items at cost, we give buyers a chance to stretch their landscaping dollars. The farther the dollars go, the better landscaped the houses," says

Herb Seltzer, AHG sales manager.

The nursery is open every Saturday, sells only to AHG home buyers. It stocks items like peat moss, shrubs, ground covers, fertilizers, hoses, and soakers. In five Saturdays, sales jumped from \$160 on first day to \$350 on the fifth.

AHG sells \$13-\$16,000 houses under VA and FHA. (FHA requires no planting and VA requires lawn seed only.)



Route prospects past a school if there is a new one near your tract. That's another way (see above) to sell prospects on your neighborhood.

The approach to one of Kirkman & Koury's subdivisions (in Greensboro, NC) was unattractive, so K&K built a new entry road past the new elementary school shown above. "We wanted visitors to see the school even before they see our houses," says Joe Koury. "People buy the neighborhood first."

continued on p 170



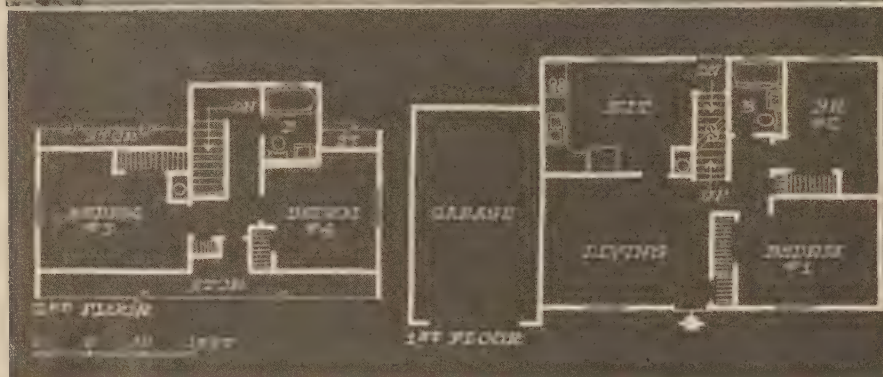


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## This prefab Cape Cod has room for expansion

It is the first more-than-one-story house Harnischfeger Homes (Port Washington, Wis) has produced in 20 years.

The house was designed by Architect L Morgan Yost for families who want 1) four bedrooms right now or 2) only two bedrooms now and space for future expansion on the second floor. There are 792 sq ft on the first floor and 453 sq ft upstairs.

Builder Roy Skogman, who introduced the house in Cedar Rapids, made 18 sales in the first two weeks. His prices (including land): \$13,900 with an unfinished second floor and no garage, \$16,450 with two bedrooms and bath upstairs, and a garage.

The house is more completely prefabricated than any previous Harnischfeger model. The package includes: house-length wall panels—fully sheathed, with foilbacked gypsum glued and nailed to 2 x 4 studs, and windows and doors glazed and in place; interior partitions with 2 x 3 studs; a panelized dormer (at rear), panelized gable ends; window screens; a factory-built stairway.

Optional package items are wood or metal kitchen cabinets and a variety of siding materials. If the house is to be erected on a slab instead of a basement, space for the basement stairway can be used for a first-floor washer and dryer.



**UPSTAIRS BEDROOMS** are good sized (smaller of the two is 11' x 11').



**KITCHEN** is big enough (14' x 11') for dining table. Cabinets can be wood or metal.

## Sales Boosters

**"Exclusiveness sells houses.** We put a sign between the sales office and the furnished models that reads: "Only 118 select families will be able to claim the Dover Bay address. Will you be one of them?" We feel sure the sign helped make Dover Bay a sellout."—*Hal Gootrad, Cleveland*

**"Rising local taxes** worry a lot of prospects. To calm their fears, we guarantee tax stability for three years to buyers in Scarsdale Park. On our \$32,000 to \$36,000 houses, we figure buyers will pay taxes of \$900 a year, or \$2,700 over the three-year period. Any taxation over this sum will be paid by our firm."—*Amicus Most, New Rochelle, NY*

**"Direct mail to renters** has been selling a lot of houses for us. We mail to every renter close to any of our five subdivisions. A good way to time a big direct mail campaign like this is to watch occupancy figures. We found that rental occupancy was down to about 75% in the first quarter of 1957, but rose to almost 100% in the first quarter of 1958. We knew that high interest rates and tight money had been keeping renters out of the housing market. So we used this jingle: 'Whether you rent or whether you buy, you pay for the house you occupy. Now is the time to own your own home.'"—*Joe Koury, Kirkman & Koury, Greensboro, NC.*

**"During the close,** we keep buyers' children out of the way but in sight, by putting sliding glass doors on the closing rooms. This enables parents to keep an eye on children playing right outside on the patio or playground, yet keeps children from distracting parents. If children are with their parents in the closing room, and the children act up, good prospects are liable to say, 'We'd better leave now and come back later without the children.'

"We feel this arrangement has paid higher dividends in closed sales than almost any other technique we know."—*Bell & Valdez, Bellevue, Wash.*

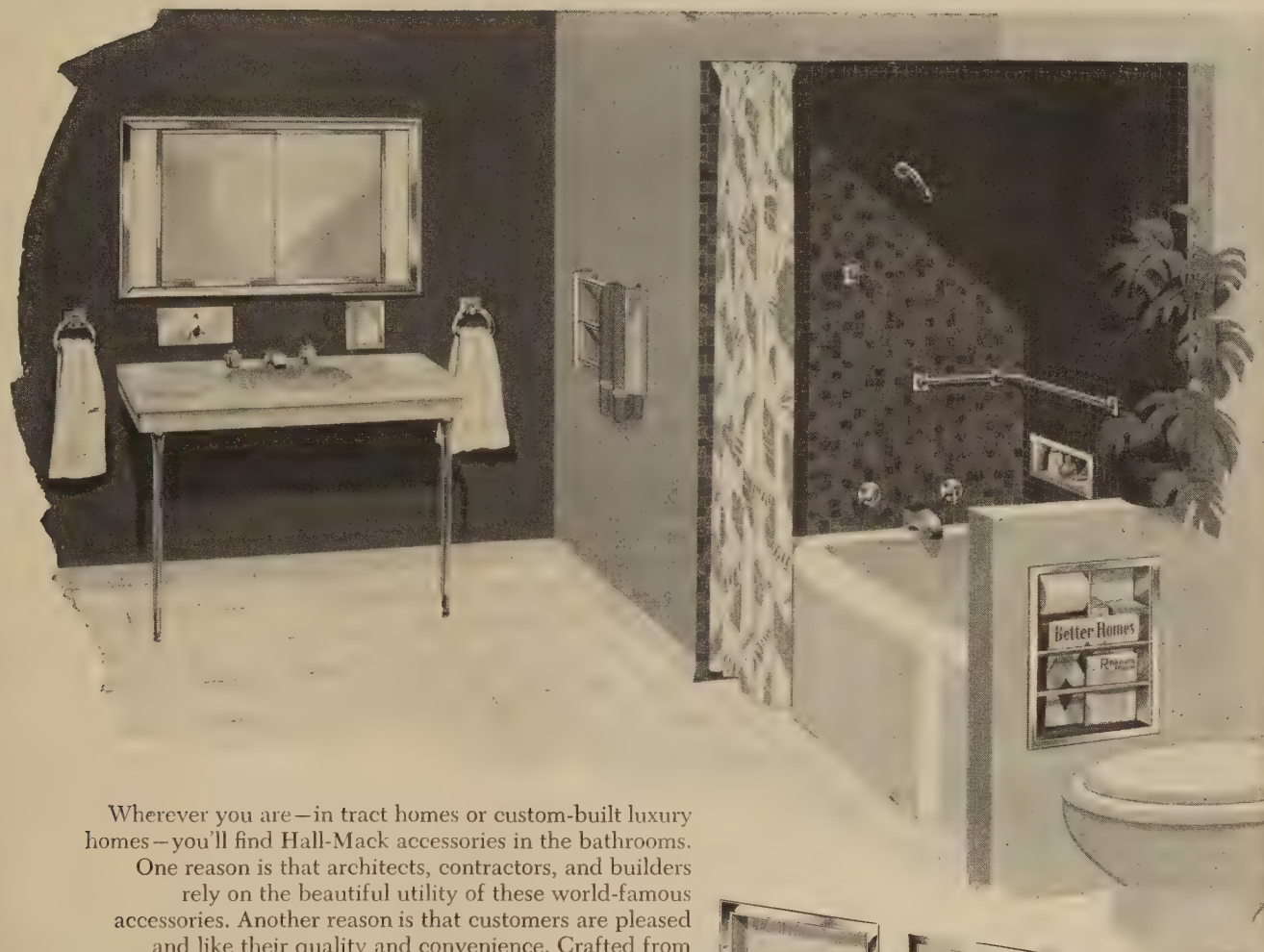
**"We fasten an up-to-date map** of St Louis to the sales brochures we leave with the personnel managers of big corporations like McDonnell Aircraft and Monsanto Chemical. We figure this added helpful touch gives us an edge when the brochure is given to company newcomers. The maps, which retail for \$1.00, cost us about 55 cents. Naturally, we mark our subdivisions clearly."—*Fischer & Frichtel, St Louis*

**"Small concrete pillars** add an estate look to our Harwood Hills subdivision. We use them along boulevards and in garden courts. We had an artist design them, and a local firm cast them."—*Burt Duenke, St Louis* /END



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accessories



Wherever you are—in tract homes or custom-built luxury homes—you'll find Hall-Mack accessories in the bathrooms.

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handy, safe spot for  
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New chrome  
Towel Ladder gives  
extra towel space  
so often needed.



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Sold by leading plumbing, tile, and hardware dealers everywhere.





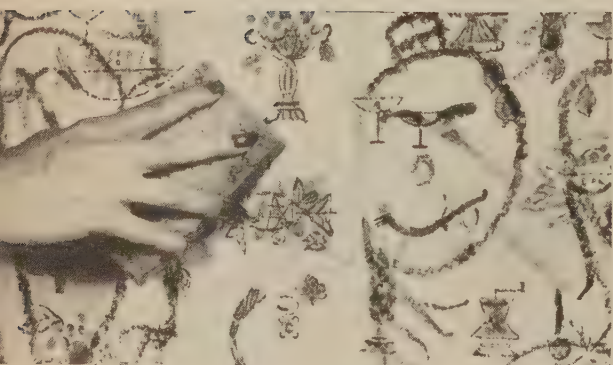
**Slip-proof floors** can be resilient, long lasting. Scotch-Tred, by 3Ms, is a 50-mil plastic film topped with non-skid particles and backed with pressure-sensitive adhesive. Scotch-Tred conforms to contours, is non-marring, spark-proof and flame-resistant, resistant to most

chemicals and solvents. Comes in 96' rolls. 4", 6", 12", 18", 24", and 36" wide; in  $\frac{3}{4}$ " x 24" strips and 9" x 9" tiles, or in custom shapes to order. Colors are beige, black, and gray.

Minnesota Mining & Mfg, St Paul.

For details, check no. 4 on coupon, p 214

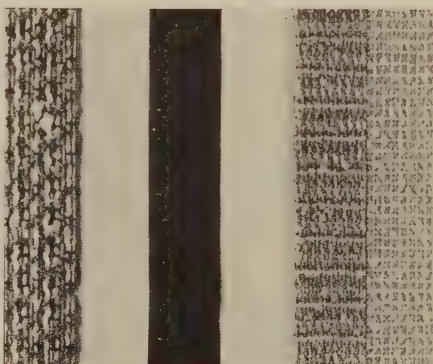
## New—for walls, windows, floors



**Stainproof wall covering**—called Fabrique by its makers, Birge & Co—is a vinyl-impregnated, nonwoven textile printed in a wide variety of colors and patterns. It is proof against almost all household stains—alcohol, lipstick, ink, grease, crayon, etc. It can be applied with any wallpaper adhesive, can be butted without overlap. Rolls 21' x 20½" are \$3.20 to \$3.85.

Birge Co, Buffalo 5.

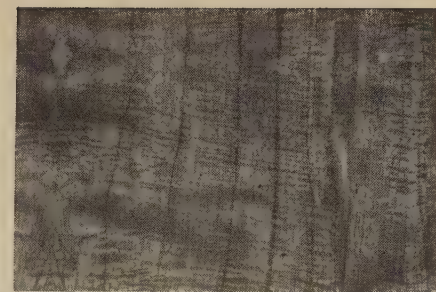
For details, check no. 5 on coupon, p 214



**Textured louver blinds** are made by impregnating drapery materials. The new blind slats have a semi-textured weave and are translucent enough to admit a filtered light. Blinds come in four weaves and four stock colors with others available on special order. They are colorfast, stretch and shrink proof, resistant to dirt, and completely washable.

Vertical Blind Corp, Los Angeles 25.

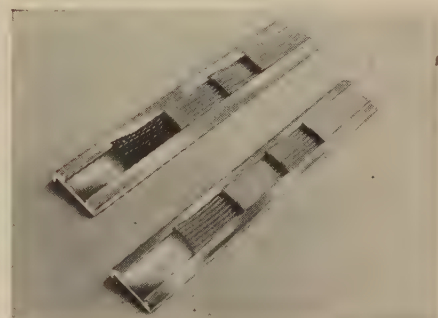
For details, check no. 6 on coupon, p 214



**New woodgrained vinyls**—figured walnut, American walnut, oriental walnut, oak—have been added to Bolta's coordinated lines of wall covering, countertopping and flooring. New material combines the look of natural grain with the tough wear-resistant qualities of vinyl plastics. A new merchandising package includes Bolta-Wall, Bolta-Top and Bolta-Floor.

General Tire & Rubber, Akron.

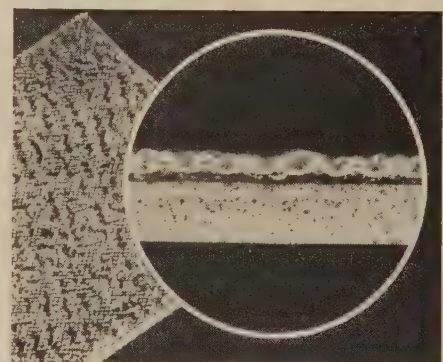
For details, check no. 7 on coupon, p 214



**Color in metal trim** for countertops and built-ins is supplied with new plastic inserts for Chromedge extruded aluminum mouldings. The color—in a wide range of decorator tones—is in a plastic strip which snaps into the metal wall strips and cap edging. The plastic is corrugated for texture, comes in  $\frac{1}{4}$ " and  $\frac{1}{2}$ " widths in 12' rolls at 3½¢ and 6½¢ a foot.

B&T Metals Co, Columbus, Ohio.

For details, check no. 8 on coupon, p 214



**Foam-backed carpet** has been specially developed for builders by Luxor Carpet Co in its new Jacq line of 100% nylon carpeting. The pile is a low loop that offers long wear and easy cleaning. It is bonded to a latex foam backing (see inset) that is moth and mildew proof and can be applied directly to concrete slabs. Carpeting comes in five colors in 54" wide rolls.

Luxor Carpet Co, Akron 10.

For details, check no. 9 on coupon, p 214

continued on p 174



# CEDAR SHAKE WALLS



*stop  
the  
traffic...*

*...start  
the  
sale*



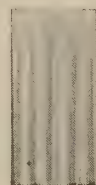
*Until a prospect stops, there can be no sale. That is why quality—unmistakable exterior quality—is vital to successful home merchandising. Cedar shake walls, with their clean-cut textures and dramatic shadow accents, put quality right out front. Out where it shows. Out where it sells. That is why genuine red cedar is the dominant wall material in so many modern communities.*

## RED CEDAR SHINGLE BUREAU

5510 White Building, Seattle 1, Washington

550 Burrard Street, Vancouver 1, B. C.

*Your Best "Outside Salesman" Is Cedar*



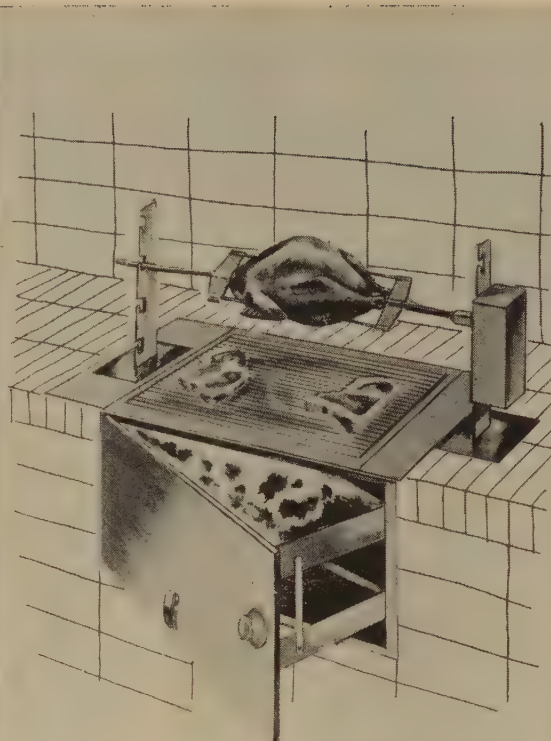




**Char-Glo unit** is gas-fired, and cooks over glowing ceramic "coals." Two models are offered: insulated Starcastle is made to fit wood cabinets; Starfire must be installed in masonry. Both have automatic pilot lights. Cooking grill tilts back to control flare-up. Either unit fits a space 27" long, 25" wide, 16" deep. Tested and approved by AGA.

Christiansen Co, Los Angeles 21.

For details, check no. 10 on coupon, p 214

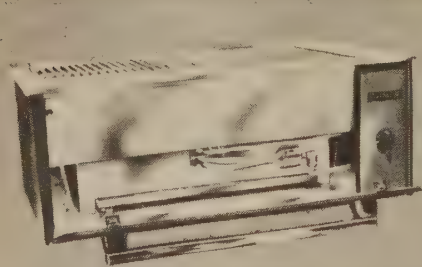


**Donley charcoal unit** supplements company's outdoor barbecues. Built in modular sizes to fit countertops, the unit has chrome handles and top frame, nickel-plated grill. Fire pan raises or lowers to adjust heat, swings out to ease firemaking, or removes for cleaning. All-steel unit fits into metal cabinets or masonry. Exhaust hood recommended.

Donley Brothers, Cleveland.

For details, check no. 11 on coupon, p 214

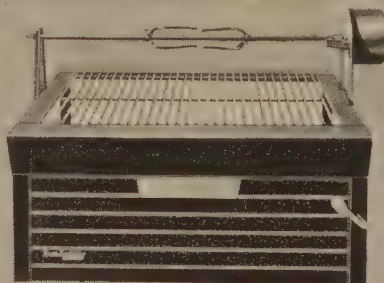
## Now you can bring the barbecue inside



**New Majestic cooks with gas** and radiant ceramic Char-Roks. Grate is castiron, frame heavy-gauge steel, grill chrome, and top rim stainless steel. 25,000 Btu burner is pilot controlled. Unit is fully insulated by 1" firebrick and thick asbestos millboard with aluminized steel liner. In masonry, unit omits back and end panels. Other models and accessories also available.

Majestic Co, Huntington, Ind.

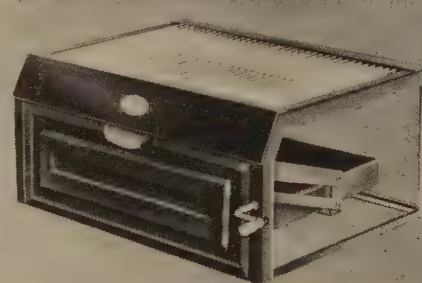
For details, check no. 12 on coupon, p 214



**Adjustafire charcoal unit** is designed to be built in, inside or out, for broiling or rotisserie cooking. Unit comes in three sizes, with or without spit, in matte black or bronze hammertone enamel. Grill is copper-nickel-chrome plated. Firebox is adjustable to control heat. No special installation is needed to fit unit to masonry or fireplace-type openings.

Burr-Southern Corp, Pasadena.

For details, check no. 13 on coupon, p 214



**Superior Feastmaster CT-400** is one of three new charcoal-fired barbecues by this maker. CT-400 is front-mounting for indoor-outdoor use, CT-500 is drop-in type, OD-300 is for outdoor use only. Indoor-outdoor units have crank-adjusted fire grates. All are all-steel construction, have 15 3/4" x 24" plated grills, fit a simple masonry shell. Black or coppertone.

Superior Fireplace, Fullerton, Calif.

For details, check no. 14 on coupon, p 214

continued on p 176





Mr. Earl Kirsch, Sec'y./Treas., and Mr. Howard Lange, President of Lange and Kirsch, Inc.

## "We had to be sold on saving money!"

"We had never used Gold Bond Permaboard Flat Sheets on a home as expensive as this," says Mr. Howard Lange, "but the customer specified Permaboard by name. As it turned out, we're sure glad he did. The 4 x 8 sheets went up faster than anything we've ever handled before... saved us a *lot* of money. Not only that, but this board and batten type construction blends beautifully with the stone front. We used Permaboard for the soffits too, and you can bet we're going to continue to use it in the future now that we've seen how attractive, practical and economical it is."

For more ideas on the uses of Gold Bond® Asbestos Cement Permaboard or Pliaboard, write Dept. HH-98, National Gypsum Company, Buffalo 2, New York.



NATIONAL GYPSUM COMPANY

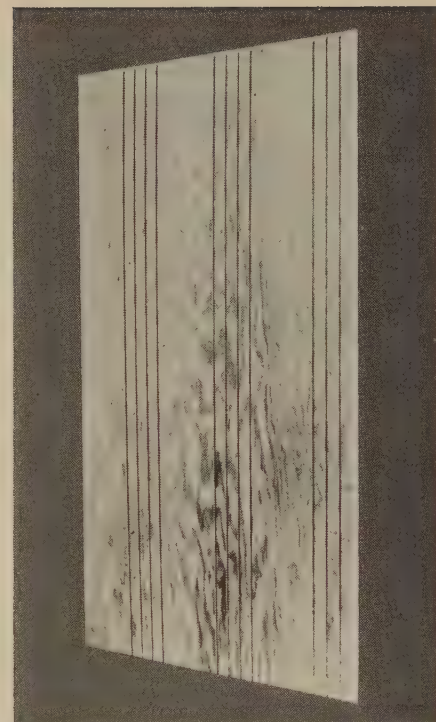




**To sheathe garage walls** National Gypsum is introducing an aluminized gypsum sheathing. Silver-Glo sheathing is a 1/2" thick t&g panel with a fireproof asphalt-treated gypsum core wrapped in water-repellent building paper. Reflective aluminum-coated exterior paper serves as final finish for garage interior. 2' width of 7'2" and 8' panels fits common 2' garage stud spacing.

National Gypsum, Buffalo 2.

For details, check no. 15 on coupon, p 214

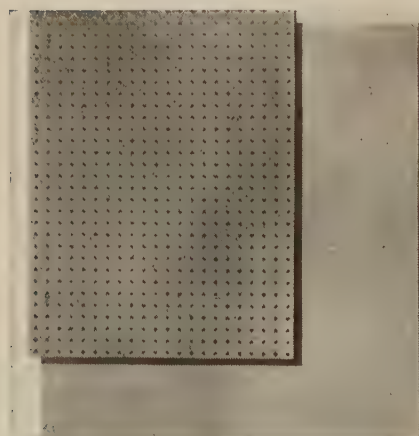


**For textured exteriors,** Snellstrom grooved plywood comes in Texture 1-11 or with grooves at 2", 4", or 8" regular or random spacing. 3/4" plywood has 3/8" grooves 5/16" deep with 3/8" x 5/16" shiplap. Face has small knots and natural character but no patches. Standard widths 16", 32", and 48"; standard length 8', but 6', 7', and 10' lengths are available.

Snellstrom Forest Prod, Eugene, Ore.

For details, check no. 16 on coupon, p 214

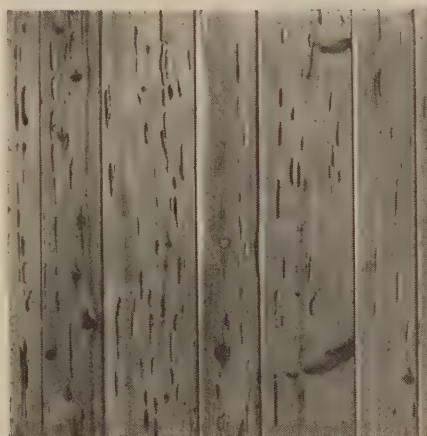
## New sheet materials do special jobs



**For decorative walls,** hardboard, in perforated and smooth panels, V-plank or V-square, is now finished in blond Driftwood tone. Panels are 4' x 8' in 1/8" or 1/4" thickness. Baked-on finish gives a scuff-resistant surface suited to recreation areas or children's rooms. Annular nails in matching color are available so that installation can be the final finish job.

Evans Products Co, Corvallis, Ore.

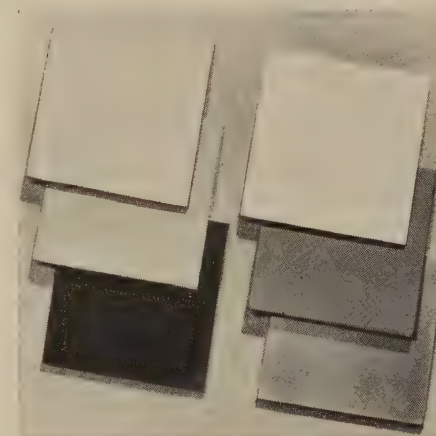
For details, check no. 17 on coupon, p 214



**To get matched panels** selected 1" pecky boards of incense cedar are laminated between other cedar boards to 3" thickness, then sawn lengthwise through pecky layer. Backing is planed to give 3/4" thick panel, face is sanded to remove fungus. Lam-Loc panels are 8", 10", or 12" wide to 16' long with t&g or straight sawn edge, can be stained, painted, or natural finished.

Ed Fountain Lumber, Los Angeles.

For details, check no. 18 on coupon, p 214



**For permanently flat walls,** Johns Manville has developed Micro-Flex-board, a precision-formed asbestos cement sheet, as a base for metal or plastic laminates or commercial and decorative finishes. Stock boards are 4'x8', 4'x10', 4'x12' and 1/8", 3/16", and 1/4" thick; unsanded for heavy laminates, belt-sanded for thin skins, drum sanded for high-gloss enamels.

Johns Manville, New York City 16.

For details, check no. 19 on coupon, p 214

continued on p 178





**life's happiest investment\***

\* National Gypsum believes life's happiest investment is a new home. We have promoted and advertised home ownership to the American public since 1928—longer and more consistently than any company in the building industry. In the September 13th issue of the Saturday Evening Post you will see the latest advertisement in this continuing campaign. National Gypsum Company, Buffalo 2, New York.







**Latest fixtures from Crane** include a new oval lavatory that fits an 18" space, a one-hand lavatory faucet, and a new tank-in-the-wall suspended closet. The nearly round lavatory styled by Henry Dreyfuss is available in seven colors and white, has concealed front over-

flow and new Singl-ese faucet. The new faucet has stainless steel operating parts, seals with—not against—water pressure. The Walsan off-the-floor closet fits 2 x 6 studding 24" oc. The steel tank is 22" high, 8½" wide, 5⅝" deep, is insulated to prevent condensa-

tion, and equipped with a new flapper valve and diaphragm float valve. The bowl hangs from a new carrier held to the studs by a tie-bar and supported by a sole plate within the wall.

Crane Co, Chicago.

For details, check no. 20 on coupon, p 214

## Here are new fixtures and fittings for baths



**One-piece hanger** holds new Kohler wall-hung lavatories to simplify rough-in job and speed installation. Slotted holes at each end of heavy-gauge steel hanger allow precise leveling. Other holes are spaced to assure firm mounting in frame, concrete, tile, or block walls. With this new rust-resistant hanger only two threaded fasteners are necessary to hold the lavatory.

Kohler Co, Kohler, Wis.

For details, check no. 21 on coupon, p 214

**Wall-hung dryer** handles wet towels, lingerie, or other light laundry, can be flush or recess mounted in a space no bigger than that needed for a medicine cabinet. Drying is done by 325-w element and 4" suction fan operating off 110-v circuit, automatic timed at slightly higher cost. Three swing-out hangers hold clothes. Installation calls for 30¼" x 14½" x 3¼" rough opening.

Louver Mfg Co, Minneapolis.

For details, check no. 22 on coupon, p 214

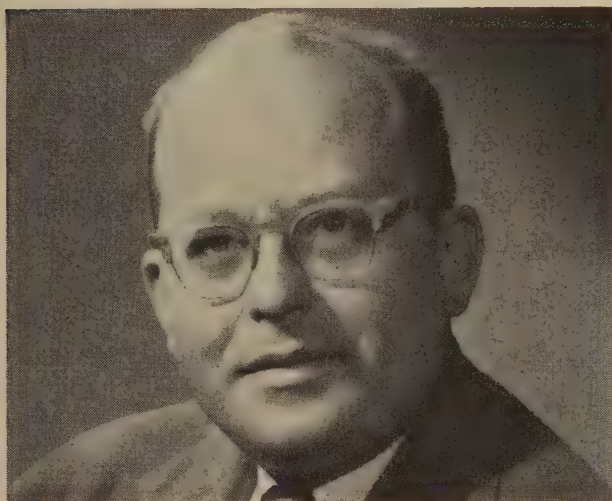


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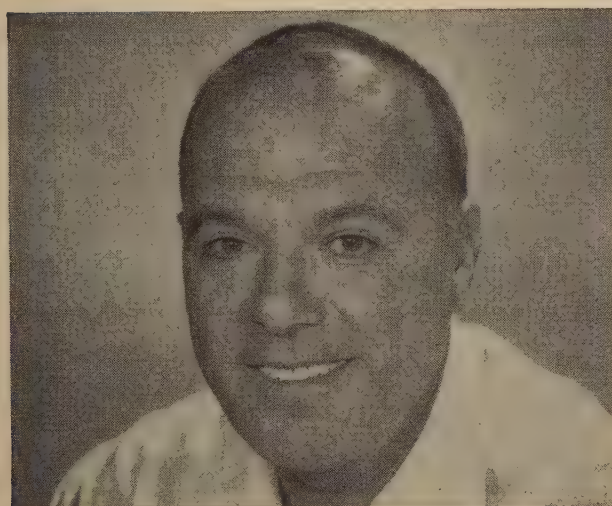




"I find it's good business to make *full* HOUSEPOWER a feature of every home we build," R. L. Hannibal of Marshall-Hannibal Co., Omaha, Nebr., reports. "It's a terrific sales clincher to show prospects exactly how and where certified wiring provides *full* HOUSEPOWER in a Marshall-Hannibal built home."



"The HOUSEPOWER Rating Sheet is one of my major sales helps," declares Leon N. Weiner of Franklin Builders Homes, Inc., Wilmington, Delaware. "It goes without saying, then, that *full* HOUSEPOWER is specified in every home we build. We place a Rating Sheet on the service panel of all our sample homes."



John Georgetti, Rutland, Vt., builder, states: "I put *full* HOUSEPOWER in every home I build—and put HOUSEPOWER in every sales pitch too. It works. Prospects realize the quality of the home when it's pointed out that the home has a convenient, expandable wiring system. Women, especially, like this."

## Full **HOUSEPOWER** homes are better—sell better!

It's as simple as this: More and more home buyers know that full HOUSEPOWER provides for the carefree electrical living they want. Result: Prospects are insisting on full HOUSEPOWER before they buy. And more and more builders report that they specify full HOUSEPOWER in every home they build. They've found that full HOUSEPOWER homes sell faster, mean more satisfied customers.

The multimillion dollar HOUSEPOWER program continues to sell your customers on the increased value of homes wired for full HOUSEPOWER. So why not build buyer confidence by assuring your prospects right off that yours is a full HOUSEPOWER home? Use the convenient HOUSEPOWER Rating Sheet to show your customers how comfort and convenience are built into your homes!

There are other profit-building sales aids too. For full information contact your local Wiring Bureau, electrical contractor or electric utility. Or we'll be happy to send details to you by mail. Write: National Wiring Bureau, 155 East 44th Street, New York 17, N. Y.

National Wiring Bureau—a sponsor of

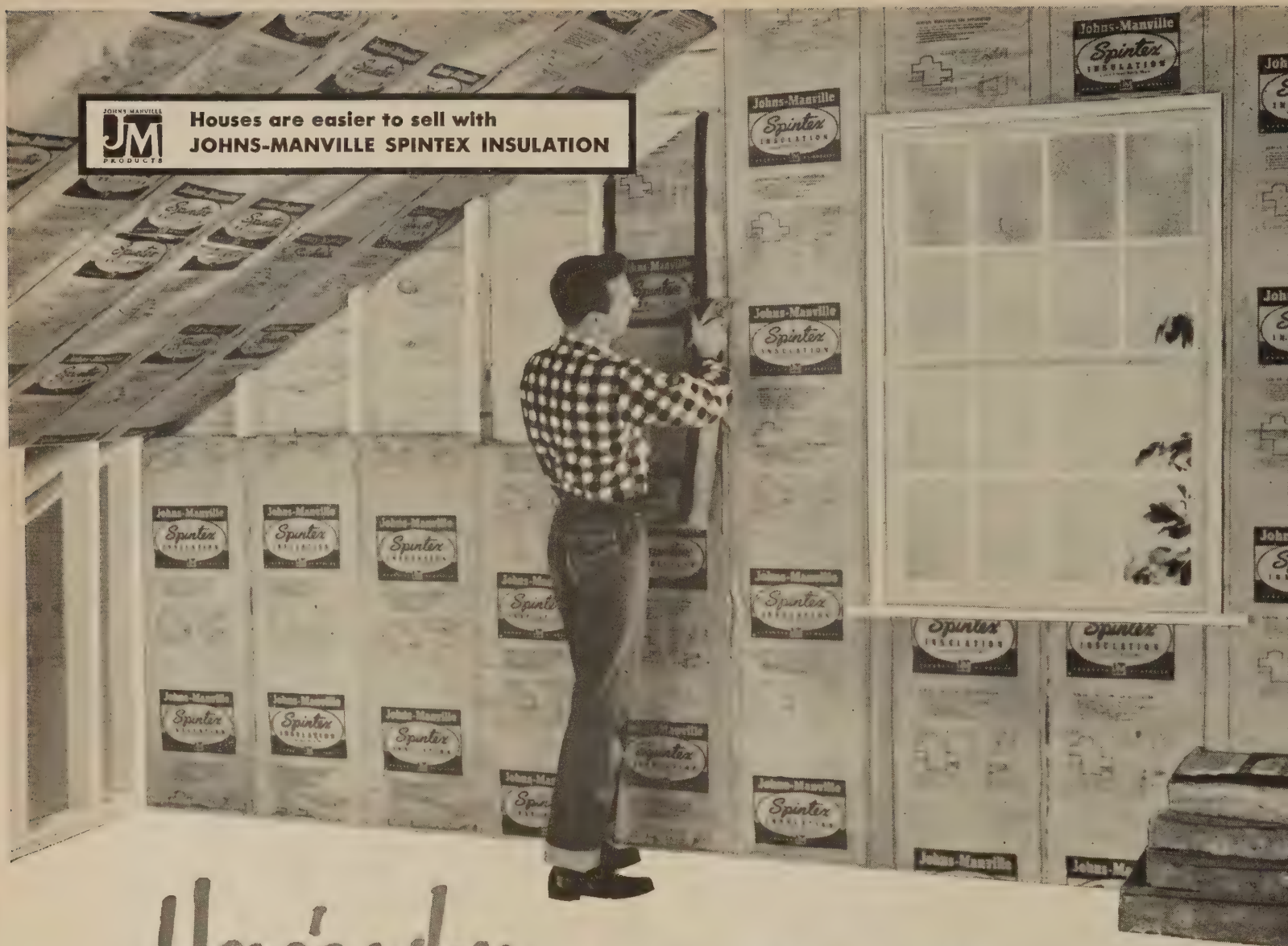
# HOUSEPOWER

TRADE MARK



A home with full HOUSEPOWER can easily be stepped-up to qualify for a Live Better Electrically medallion.





# Here's why 314 leading builders are using Johns-Manville SPINTEX® insulation in 18,979 new houses

IN A nationwide home-building merchandising program, 314 out of 380 of the country's leading builders specified Johns-Manville SPINTEX home insulation for homes they are now building. These builders chose SPINTEX because they know *it has great home-buyer appeal* and will help them sell and merchandise their homes.

In a recent survey, homeowners voted 7 to 1 in favor of Johns-Manville as the manufacturer of insulation in which they would have the greatest confidence. Home prospects know that Johns-Manville SPINTEX home insulation keeps homes warmer in winter and cooler in summer. They also know that it reduces heating bills and cuts air-conditioning operating costs.

SPINTEX is a vastly improved home insulation, manufactured by the revolutionary Johns-Manville spinning process which produces finer fibers for greater efficiency.

Johns-Manville SPINTEX home insulation comes in various thicknesses up to 6 inches, and in blankets or batt form. Blankets are available either Kraft paper-wrapped or aluminum-wrapped. Batts and blankets are light in weight . . . easy to handle . . . cut clean and sharp. These ideal characteristics make for better, faster, labor-saving application.

We'll be glad to send you a copy of our new booklet, "Comfort And Its Control In Light Construction." Write to: Johns-Manville, Box 111, New York 16, New York. In Canada, Port Credit, Ontario.



## JOHNS-MANVILLE





## THESE OTHER JOHNS-MANVILLE BUILDING MATERIALS MAKE HOMES EASIER TO SELL

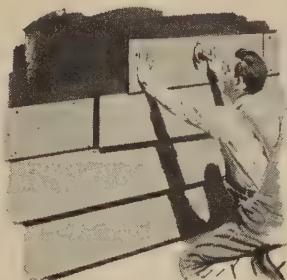


**SPINTEX® "Blown"**  
Insulation for new and existing homes. Spintex insulation in nodulated form is "blown" into inaccessible hollow walls and attic spaces.



**Pre-Primed Flexboard®**  
comes to job site ready to take any paint. Large-size building sheets ideal for board and batten construction. Fireproof and rotproof.

**Colorbestos® Sidewall**  
saves expensive repainting for the homeowner, adds distinction and buyer appeal to the home. New Colorbestos process assures lasting color and texture. Fireproof, rotproof and weatherproof.



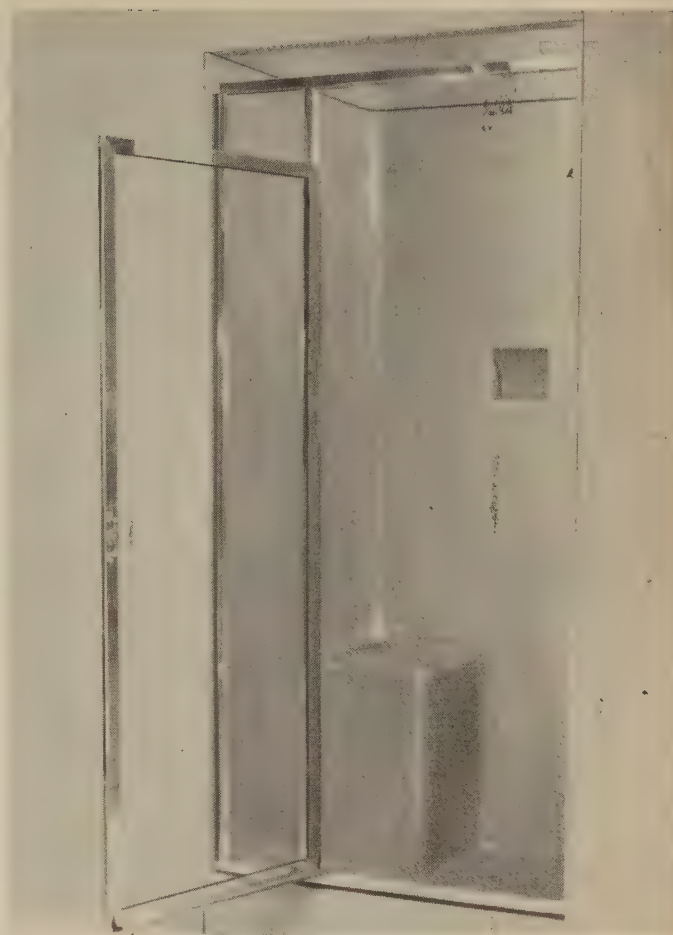
**Terraflux® Vinyl Asbestos Floor Tile**, keeps its "first day" beauty. Easily kept spick-and-span, it has great appeal to home buyers.



**Seal-O-Matic® Shingles**, the only self-sealing shingle proved on over 300,000 homes. Resists wind, rain, hurricane. Saves costly roof repairs. Attractive colors and blends.



Ask your J-M representative about the 7-star advertising and merchandising plan to help you sell more homes



**One-piece shower stall** is fiberglass-reinforced plastic, has no joints at ceiling, floor, or wall corners, is completely leak-proof. Even seat and soap dish are cast in single continuous surface. Available with three walls in three sizes—32" x 32", 36" x 36", 48" x 32"—or two walls in two sizes—32" x 32" and 40" x 40"—all 80" high. Price \$115 to \$145.

National Fiberglass Corp. Gilroy, Calif.

For details, check no. 23 on coupon, p 214

## New ideas to use in your shower



**Flexible shower head** can be added touch in a family bath. Coiled metal hose brings shower down to child size or helps adults keep water out of eyes and hair. Flex-arm is chrome plated with flexible waterproof liner, fits standard 1/2" threaded pipe. Can be installed as easily in remodeling as in new construction. Shower arm retails at \$8.95, is available to the trade at \$5.97.

Shur-Lock Home Prod, Kalama, Mo.

For details, check no. 24 on coupon, p 214

**New one-hand control** for tub or shower uses the same single piston principle as Moen kitchen and lavatory faucets. One motion controls both flow rate and temperature of bath water. Single piston seals with, not against, water pressure to give positive closure, and has stainless steel working parts and Neoprene O ring to provide no-leak, no-drip operation.

Moen Faucet Co, Elyria, Ohio.

For details, check no. 25 on coupon, p 214



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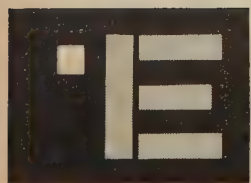
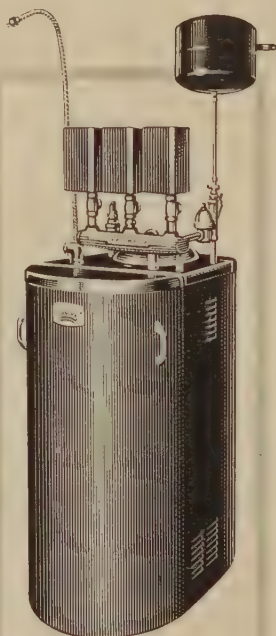
AS LOW AS

**\$25** PER ZONE...

GIVES YOUR HOMES THE STRONG  
MERCHANDISING ADVANTAGE OF EDWARDS  
PROVEN ZONE-CONTROL HEATING SYSTEM.

- Edwards Zone-Control Heating System costs as low as \$25.00\* per zone more than non-zone systems. \*(average installation)
- Zoned heat gives you a strong merchandising advantage...helps you sell homes faster.
- A complete installation package can be installed in just 1 day by 2 men.
- Edwards Zone-Control Heating System, proven through thousands of installations, can give you up to 6 zones, yet uses only one pump, due to Edwards' positive-action motorized valve system.
- Complete package weighs under 400 lbs.
- 20 year guarantee.
- Brings quality zone-control base-board heating prices within reach of lower priced development housings as well as custom built homes.

Write, wire or phone  
for complete information  
and brochures.



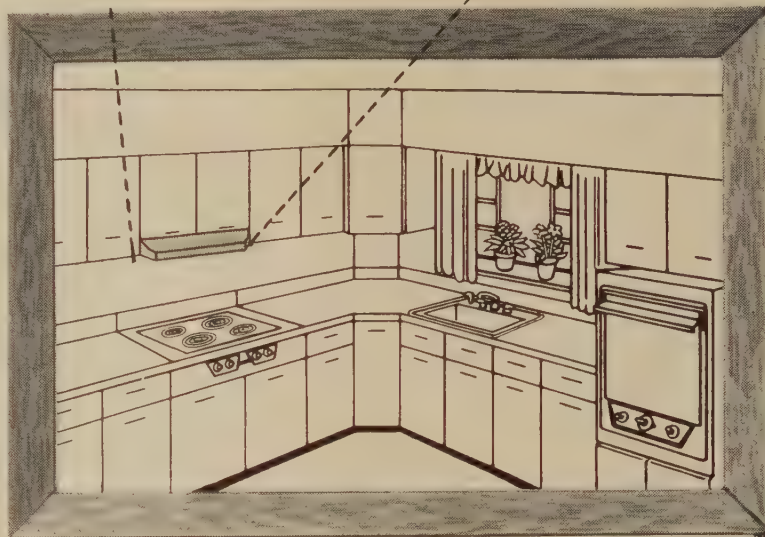
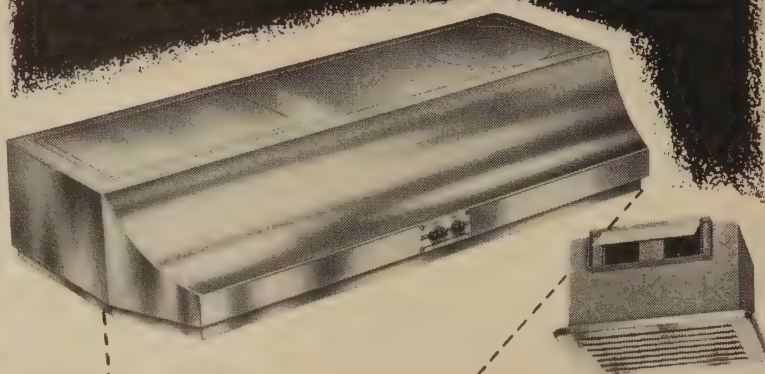
**EDWARDS**

ENGINEERING CORPORATION

300 Alexander Ave., Pompton Plains, N. J.

Telephone: TErhune 5-2808 or TErhune 5-3352

Put *Broan* Range Hoods  
in your kitchen picture



## Premium in Everything — but price

If you'd like solid ammunition to outsell your competition, if you're interested in easy, fast-running installations to hold down cost, if you're concerned about the right price in making a bid — take a look at the great advantages Broan hoods provide:

- a fresh new look in styling . . . with contour corners that allow adjacent cabinets to open fully
- removable, reversible top plate with rectangular and circular knockouts — a Broan origination — to save time and work in installation
- heliarc welded seams eliminate trim strips that collect grease
- push-button controls — out-in-front and eye-high — factory installed and wired
- concealed counter lighting; no shadows, no glare
- adaptable to 3 exhaust systems — a great performing twin blower, a 10" ceiling fan or an 8" ceiling fan

All of these plus values come your way without any premium in price. So check into Broan as hundreds of alert contractors already have. Write today for the name of the distributor in your area and for a fully illustrated specification bulletin.

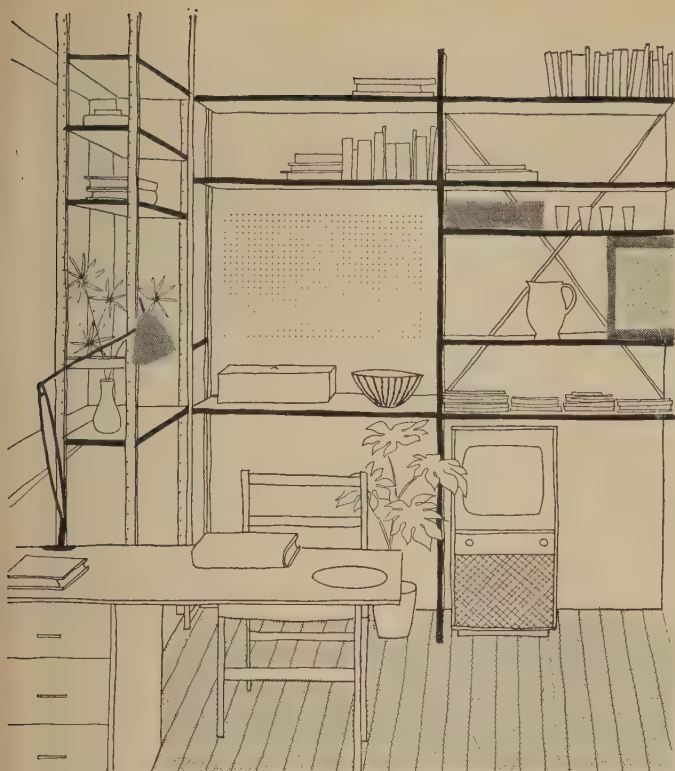
*Broan* MANUFACTURING CO., INC.

924 W. State St.  
Hartford, Wis.

Specialists in Quality Ventilating Equipment for Over 25 Years.

Near Milwaukee





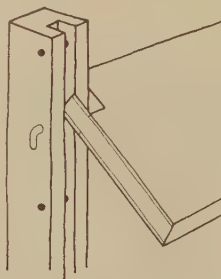
**LIGHT OPEN SHELVES** look good enough to use in den or living room

## Here's a new system of flexible shelving

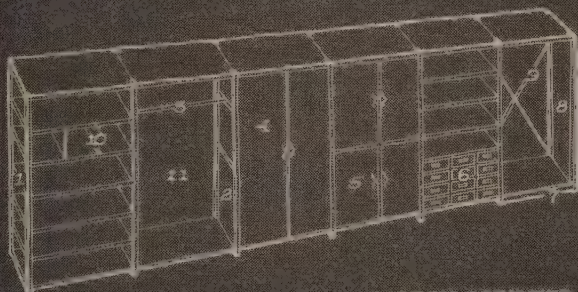
Lundia system of prefabricated adjustable shelving, designed in Sweden, now made in the US, can be used decoratively in living areas of your houses, or for inexpensive storage in your houses or shop. These shelves can be installed, changed, or dismantled quickly without special tools, can be varied to meet any custom need within a 1" module. They are durable, will support up to 500 lb per shelf. Shelves can be open or closed, clear or divided; come in unfinished lodgepole pine, unfinished or sealed and lacquered select fir. Depths: 12", 18", 24", 30"; lengths: 36", 42", 48"; heights: 36", 72", 84", 96", 108".

Swain & Myers, Inc, Decatur, Ill.

For details, check no. 26 on coupon, p 214



**SHELVES** lock with simple pin system.



- |                               |                           |
|-------------------------------|---------------------------|
| 1. OPEN UPRIGHT               | 6. DRAW CABINETS          |
| 2. CLOSET FILLED TYPE UPRIGHT | 7. HIGH PLATE             |
| 3. CLOTHES RAIL               | 8. FLUSH END TYPE UPRIGHT |
| 4. FULL HEIGHT DOORS          | 9. CLOTHES BRACK          |
| 5. HALF HEIGHT DOORS          | 10. DIVIDERS              |
|                               | 11. PANEL BACK            |

continued on p 184



MANUFACTURERS OF  
WINDOWS  
SINCE 1896

**Drew Barron** Mill Superintendent  
**says:**

"Our High-Test Wood Window unit line has been balanced with **UNIQUE SASH BALANCES** for over 20 years . . . a positive indication of customer satisfaction."



"Now . . . added to our wood window line is the new **UNIQUE** balanced **UNI-flex**, full-jamb weatherstrip unit. Successfully tested for air infiltration by the Robert W. Hunt Co., Engineers, Chicago and awarded the A.W.W.I. Seal of approval. Another **UNIQUE** product we are completely sold on."



"The Allen Metal Window Units are **UNIQUE** balanced . . . again we rely on **UNIQUE SASH BALANCES** for the best possible materials to satisfy our customers."



**UNIQUE BALANCE COMPANY**  
41 MAGEE AVENUE STAMFORD, CONNECTICUT





**paint selection!  
color styling  
merchandising**

**you get them all in**

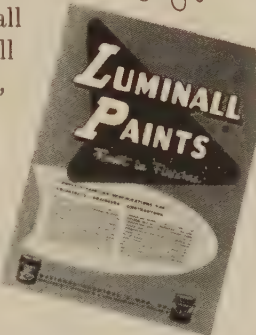
# LUMINALL® PAINTS

## Builder-Architect Package

**paint selection**



Big 12-page "Paintcyclopedia"—a veritable catalog of information covering all interior and exterior painting. All construction, including masonry, wood, aggregate block, plaster and acoustical tile. A complete "how-to-paint-it" for everything from the side of a home to a concrete swimming pool! Includes 74 product glossary.



**color styling**

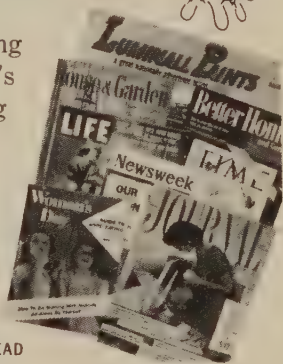
A handy pak of the loveliest color cards imaginable plus a big color book to help you select colors for all interiors, exteriors too! Or Luminall's expert color stylists will do the whole job for you free. Check and mail coupon below for special color service!



**merchandising**



A tremendous array of merchandising display helps styled from Luminall's massive 1958 consumer advertising campaign in LIFE, Better Homes & Gardens, House Beautiful, Woman's Day and leading magazines. Luminall, a great nationally advertised brand helps sell your homes faster. Check coupon for details.



CLIP COUPON TO BUSINESS LETTERHEAD

**LUMINALL PAINTS, DEPT. T25, CHICAGO 9, ILLINOIS**

Please send full details on ☐ "PAINTCYCLOPEDIA"

- ☐ HANDY COLOR CARD PAK AND COLOR BOOK
- ☐ BUILDER-ARCHITECT COLOR SERVICE
- ☐ SUPER MERCHANDISING SERVICE

NAME \_\_\_\_\_

FIRM \_\_\_\_\_

ADDRESS \_\_\_\_\_

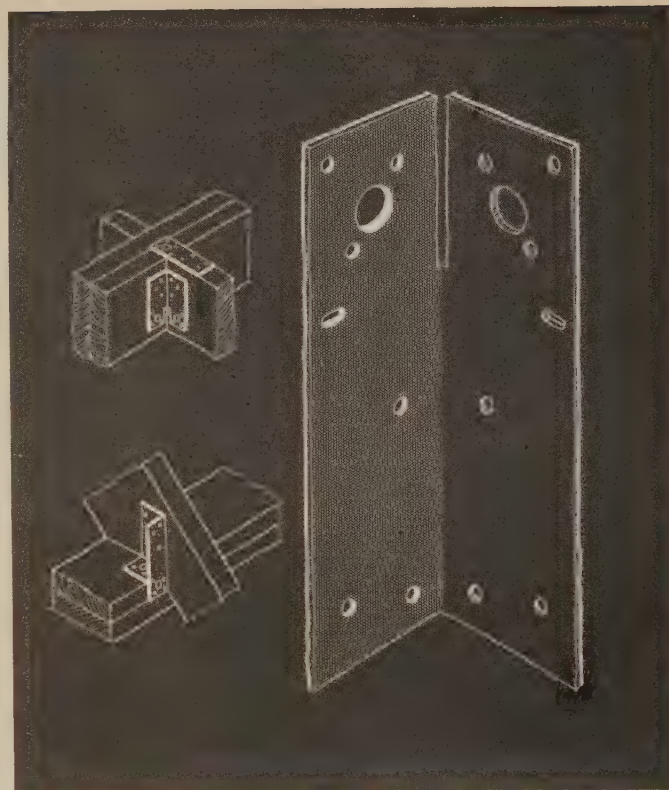
CITY \_\_\_\_\_

ZONE \_\_\_\_\_ STATE \_\_\_\_\_

**LUMINALL PAINTS**

a great nationally advertised brand

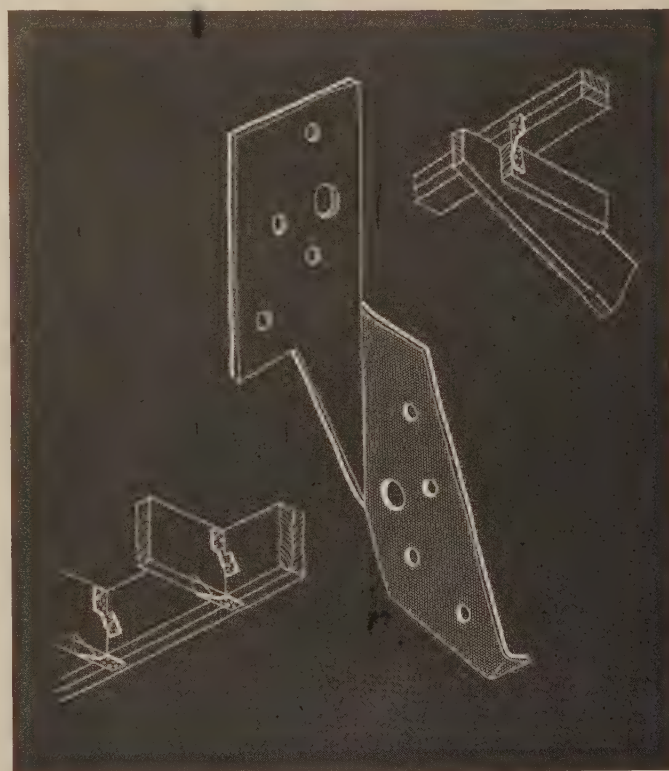
CHICAGO 9 • NEWARK 5 • LOS ANGELES 1 • DALLAS 7



**One anchor does most jobs** of joining 2" lumber in butt, right-angle, or acute-angle joints as shown above, takes loads of 300 to 900 lbs. Strong-Tie anchor is 18-gauge galvanized steel, 4 7/8" long with 1 5/8" sides. Eleven-gauge nails 1 1/4" long are included. Packed 100 a carton, weight 30 lb. Simpson Co, Oakland, Calif.

For details, check no. 27 on coupon, p 214

**Two new all-purpose framing anchors**



**Single all-purpose anchor** from Teco also gives strong nailed connections with 2" lumber without special fitting. It eliminates toe-nailing, strap hangers, notching, has special projection to help locate anchor. 18-gauge Du-Al-Clips for right or left hand come complete with special nails.

Timber Engineering Co, Washington, DC.

For details, check no. 28 on coupon, p 214

continued on p 186

HOUSE & HOME



# Are the bathrooms in your model homes making sales easier?

*CRANE fixtures add the look of quality to your entire house...at no extra cost*

Our builder friends tell us: "The bathroom is second only to the kitchen when a woman shops for a home." (And you can bet she's influenced by a look of quality—or lack of it.)

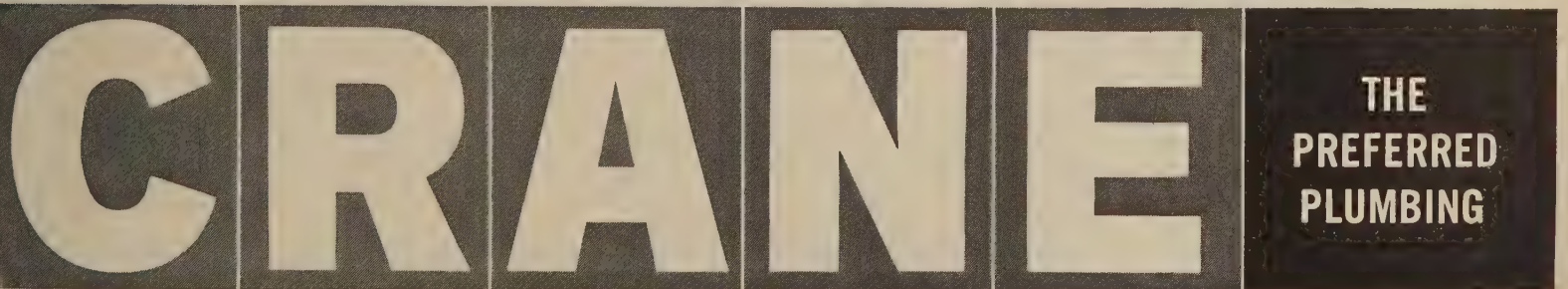
Why not let your bathrooms work harder for you by using Crane—the preferred plumbing.

An attractive Crane bathroom gives people the same feeling of satisfaction they get from owning fine silver or china . . . or even a fine car.

Yet Crane, for all its beauty, doesn't cost

any more. The fixtures just look that way because they're so attractively styled by designer Henry Dreyfuss. And, because each piece is hand-finished to give a lifetime of satisfaction.

Get in touch with your Crane Builder Representative. He'll be glad to tell you about the full line of Crane fixtures . . . cast iron, vitreous china, steel, and exclusive Crane Duraclay. Plus many new ideas and sales aids to make your selling job easier.



CRANE CO. 836 South Michigan Avenue, Chicago 5 • VALVES • FITTINGS • PIPE • PLUMBING • KITCHENS • HEATING • AIR CONDITIONING



# ANODIZED ALUMINUM



Preassembled for  
Drop-In Installation

## Weatherstrip and Sash Balance Combination with Flocked Springs

**NO CORROSION . . .**

**No Stain . . . No Blackoff**

**No Surface Blemish . . .**

**No Discoloration**

## ALLMETALITE

ALLMETALITE (ANODIZED) aluminum alloy is another factor in All-metal's march, since 1915, toward maintaining and improving the quality of its products.

This special electro chemical process develops on the aluminum alloy surface a pre-hardened, pre-oxidized coating that will not chip, peel or blister. Finally the oxide coating, being porous, is sealed in by a special lubricant. The combination of aluminum oxide and special lubricant provide a strip that is free from discoloration, stain and surface blemish. And the silver sheen surface will, with minimum maintenance, not change nor lose its lustre.

In addition—ALLMETALITE Balance Strip is free from the stain of black-off, the hazard of salt spray and is resistant to abrasion from windblown sand.

Ready-to-install preassembled balance strips—completely weatherstripped and fitted with silent flocked springs are modest in price and abundant in value when formed from ALLMETALITE—anodized aluminum. Additional information will be sent immediately upon request.

**MILLWORK JOBBERS**—Call or write for details, Phone: UNiversity 9-9300

**LUMBER DEALERS**—Ask your jobber for window units equipped with ALLMETALITE

ALLMETALITE is our trade name for aluminum anodized by the ALLMETAL continuous coil process. We invite your inquiry for the anodizing of aluminum coil stock.

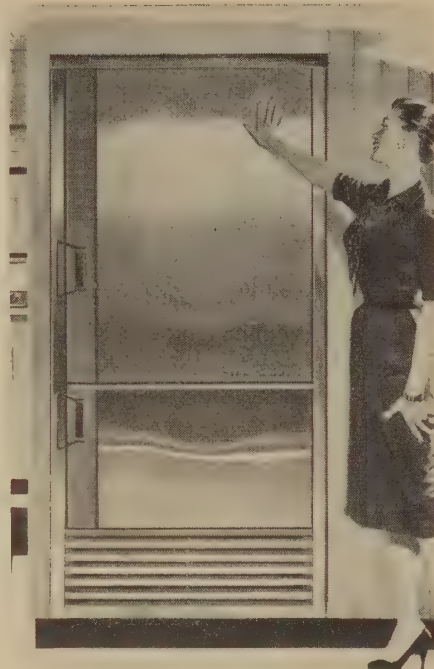
**ALLMETAL Weatherstrip Company**

Name "ALLMETAL" Registered U.S. Patent Office

**1917 Ridge Avenue**

**Evanston, Illinois**

### New products

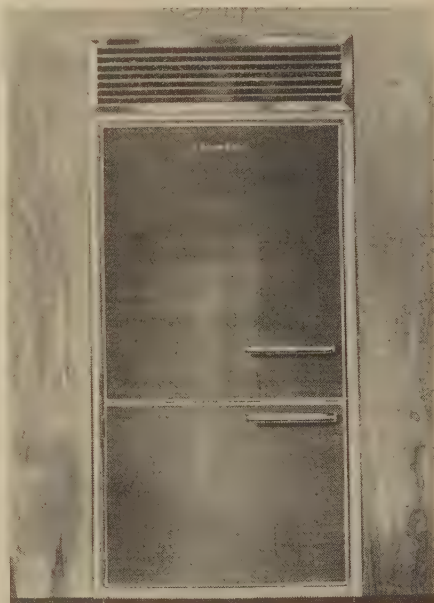


**Thermador refrigerator-freezer** is rated at 14.2 cu ft total capacity; 10.2 cu ft of refrigerator space, 4 cu ft in freezer. Unit is completely self contained; when built in, it needs no vent, flues, or extra bracing. Full length louvers allow air circulation. Comes in left or right hand models in stainless steel or five colors—white, turquoise, yellow, pink or copper. Suggested price: \$799.95.

Thermador, Los Angeles.

For details, check no. 29 on coupon, p 214

### Two big new built-ins



**Chambers' big built-in** is rated at 17.3 cu ft of which 10.8 cu ft at top is refrigerator space, 6.5 cu ft below is freezer. Refrigerator and freezer have separate condensers, accessible from the front. The unit can be built into a space 7' x 3' x 2'. Stock finishes are antique copper and stainless steel, but unit is also available prime coated for custom color matching.

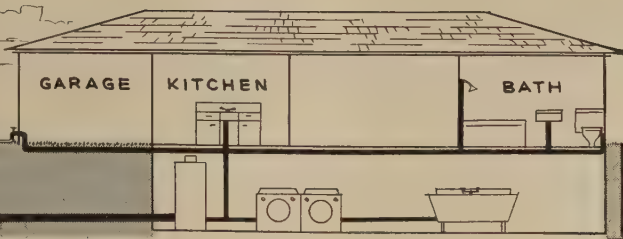
Chambers Built-Ins, Chicago.

For details, check no. 30 on coupon, p 214

continued on p 188



## Make Your Homes More Salable —Even over Low Water Tables



Insist on

# RED JACKET "Submerga" Pumps

Home buyers want plenty of water and plenty of pressure. They want it not only for household use but also for lawn sprinkling, gardening and car washing. Successful home builders also know that such water consuming appliances as automatic washers, dishwashers, and garbage disposal units, as well as extra bathroom facilities, make homes easier to sell. With a Red Jacket pump in the water system home builders can be sure there is plenty of water at enough pressure to make these sale producing appliances work properly and satisfy buyer's demands.

**Pump from depths to 1000 feet—**Red Jacket "Submerga" pumps are valuable to home builders who encounter low water tables. There are 48 models in five series that give capacities to 100 gallons per minute. They operate deep in the well and push the water to the owner's water system from depths to 1,000 feet. Red Jacket has over 10 years field experience behind them with "Submerga" pumps and is one of the pioneers of submergible pumps for home water systems.

**Capacities to serve more than one home—**Red Jacket "Submerga" Big-Flo Pumps offer builders important savings. They have rated capacities of 45 and 70 Gallons Per Minute so they can handle the water needs of several homes to reduce drilling costs. All models are noiseless since they are out of the house and deep in the well. They are completely lubrication free and none of the models need pump house or pit.

**Nation-wide service backing—**Any good product needs adequate service backing and Red Jacket has backed their superior product with service facilities unequalled by any other pump manufacturer. There are well over 100 Service Stations located throughout the United States, Canada and Alaska. All are reliable, established firms that have complete stocks of parts and are equipped and trained to give quality service to Red Jacket "Submerga" pump owners.

The Red Jacket "Submerga" pumps and the Red Jacket line of Jet Pumps are sold through a nationwide distributor organization who can recommend the proper size and type of pump for every installation. This distributor organization as well as the service facilities protect the Home Builder's business reputation by providing buyer-satisfying water systems.



## RED JACKET MANUFACTURING CO.

Davenport, Iowa



RED JACKET MANUFACTURING CO., Dept. HH9  
Davenport, Iowa

Gentlemen:

Please send me complete information about your:

☐ Jet Pumps ☐ Submersible Pumps

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

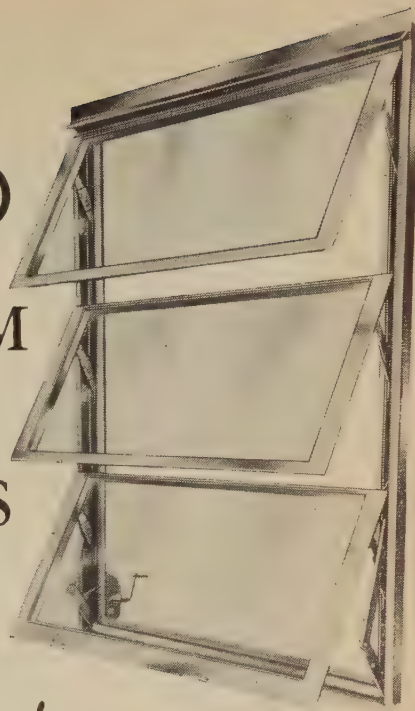
City \_\_\_\_\_ State \_\_\_\_\_

WS 118



## ALUMINUM AWNING WINDOWS

... the  
*Aristocrat of  
home windows!*



Vampco's Tru-Seal "Full View" Aluminum Awning Windows are the very last word for modern residential construction and are also widely used in commercial and institutional buildings. They can be used as separate units, flankers for picture windows or combined with panels to form either curtain or window walls.

Made of the finest quality tempered aluminum extrusions, Vampco Tru-Seal windows have the trim, narrow lines that are so essential to meet current architectural trends. Their operative mechanism and micro-adjustment are exclusive patented features. Controlled ventilation . . . complete weatherstripping . . . easy washing from the inside . . . lifetime screens and storm sash interchangeable from the inside . . . low initial and maintenance costs are among the many outstanding advantages that Vampco Tru-Seal awning windows provide.

Vampco Tru-Seal Awning Windows exceed Aluminum Window Manufacturers' tests A-A1 and A-A2 and are accepted for residential and commercial buildings by F.H.A. Available in 54 standard sizes . . . special sizes to fit any opening at moderate cost.

The Vampco line also includes aluminum casement, intermediate projected, glass block and basement windows. For complete details, mail coupon below, today.

## VALLEY METAL PRODUCTS CO.

PLAINWELL, MICHIGAN



SUBSIDIARY OF  
**MUELLER BRASS CO.**  
PORT HURON, MICHIGAN

A NAME THAT MEANS THE  
VERY FINEST IN LIFELONG  
ALUMINUM WINDOWS

**VAMPCO**

See Complete File  
in Your Current Sweet's Catalog

**VALLEY METAL PRODUCTS CO.**  
Dept. HH-69, PLAINWELL, MICH.

- ☐ Send Light Construction Aluminum Window Catalog.  
☐ Send 56-page Industrial-Institutional Window Catalog.  
☐ Send Curtain Wall Catalog.

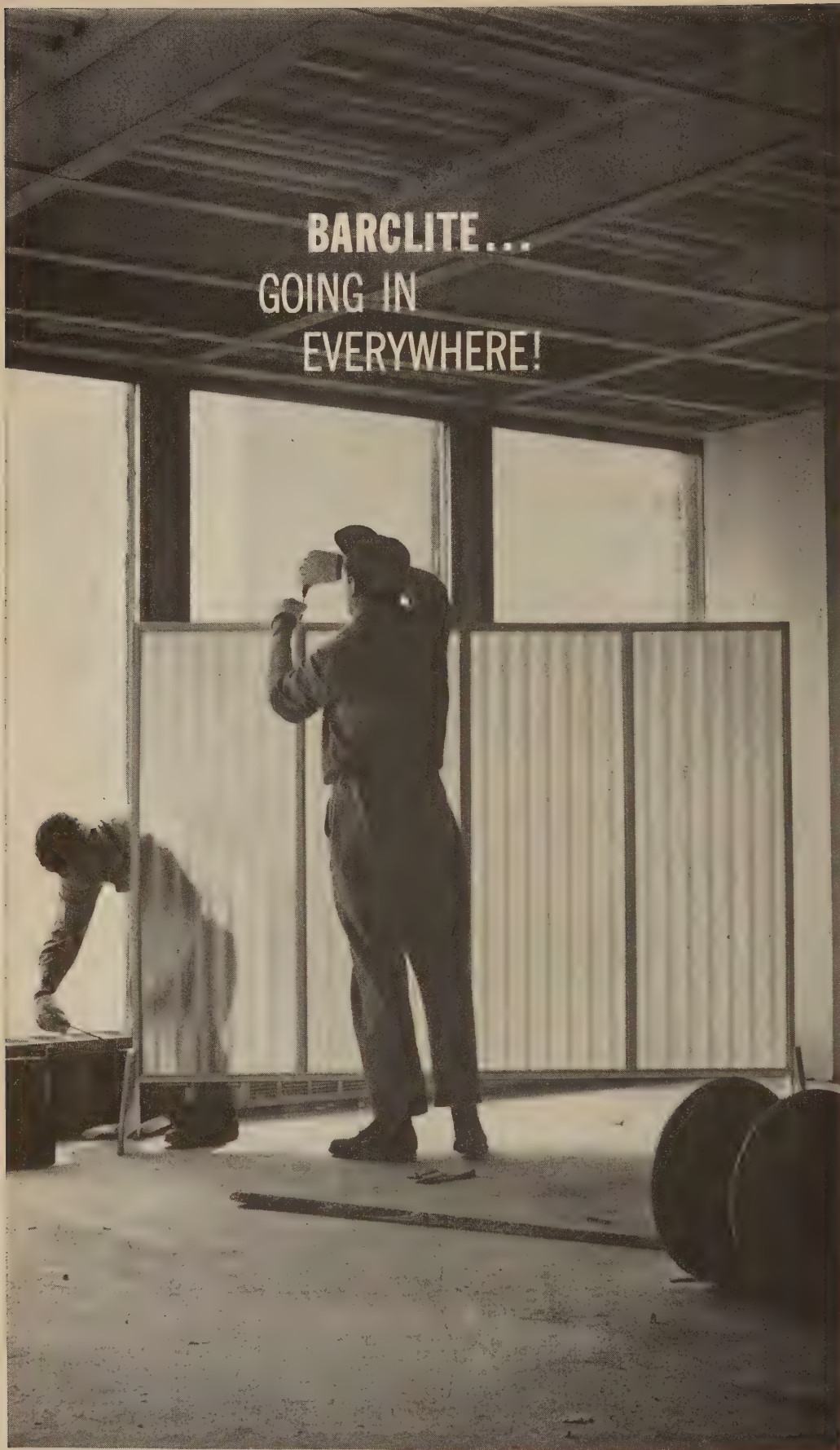
NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_





**BARCLITE...**  
**GOING IN**  
**EVERYWHERE!**

Barclite is getting the **big build-up** inside homes everywhere! Inside . . . dramatic room dividers, movable walls, partitions, dropped ceilings. Outside . . . roofing, glazing, siding, carports, patios, awnings, and more! **Economical** . . . lightweight, easier to handle, faster installation, easier to live with, no painting, no polishing. **Translucent** . . . keeps sun's glare out, exclusive Infrablok® keeps panels cooler longer, diffuses light yet assures privacy. Shatterproof, 14 colors, new decorative panels too. Write for free samples and consultation services for your specific needs.

## **BARCLITE CORPORATION OF AMERICA\***

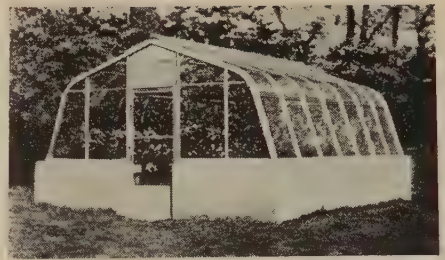
Dept. HH-9, Barclay Building, N. Y. 51, N. Y.

\*an affiliate of Barclay Manufacturing Company, Inc.



**No other standard fiber glass panel has earned all these seals!**

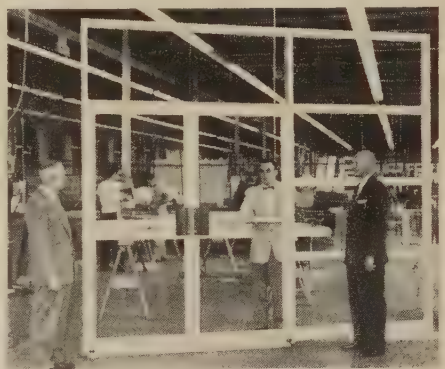
## **New products**



**Low cost greenhouse** is prefabricated of aluminum in free-standing or lean-to models for quick and easy erection. Features include weatherproof, rustproof, and insectproof construction; curved eaves; automatic ventilation for 12-month-a-year protection of plants, flowers, and cuttings. Economet retail prices from \$186.

Metropolitan Greenhouse Mfg, Bklyn.

For details, check no. 31 on coupon, p 214



**Entrance door components** for community service buildings, shopping centers, motels, etc, are now being made in stock and custom models by Valley Metal Products. The line will include doors, frames, side lights, and transoms, all made from Vampco's own aluminum extrusions, which can be assembled in package units to fit the job.

Valley Metal Products, Plainwell, Mich.

For details, check no. 32 on coupon, p 214



**Disposable plastic gloves** come in rolls of 12 to 1000 at a cost in 1000 lots of about 3¢ a glove. Handgards are heat sealed 1 3/4 mil polyethylene and are resistant to paints, acids, solvents, mastics, and other staining and irritating materials. The gloves are thin enough to give more sensitive feel than rubber gloves and do not pucker like rubber. Flare at wrist ventilates standard gloves; heavier grade also has perforated backs.

Plasticsmith, Inc, Concord, Calif.

For details, check no. 33 on coupon, p 214

continued on p 190

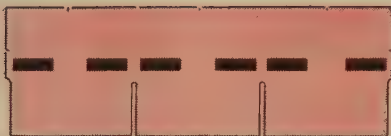
HOUSE & HOME





**WHEN THE  
WIND  
BLOWS...BARRETT**

**STORM KING†  
SHINGLES WON'T  
BUDGE**



Now Barrett has developed one of the most storm-resistant shingle designs in the industry. It's the Barrett "Storm King" Shingle, with wide bands of adhesive which seal the butt end firmly down.

The result is a shingle roof virtually welded into a continuous asphalt shield. Thoroughly sealed by solar heat, these shingles defy the efforts of vigorous winds to creep under them. Stormproof your residential specifications by calling for Barrett "Storm King" Shingles.

†Trade Mark of Allied Chemical



**BARRETT DIVISION**  
40 Rector Street, New York 6, N. Y.



# REVOLUTIONARY NEW HARDWOOD PARQUET



Adds 6 sales advantages  
to your homes!

Illustrated: Harris Par Oak BondWood with Walnut divider strips.

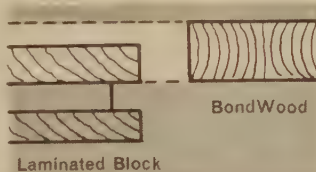
## FOR INSTALLATION OVER CONCRETE OR WOOD

**Square Joints** — no beveled edges • **Different Pattern** — grain direction changes every 4" • **Easily Repaired** — individually replaceable slats • **Tighter Fit** — unique construction makes for less contraction and expansion.

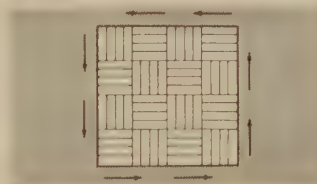
Add all these exclusive sales advantages together and you have HARRIS BondWood — America's newest and most exciting flooring! Entirely new in concept — sales features found in no other parquet to add sales excitement to your homes from the floor up! Write for free color brochure today. See our catalog in Sweets'.

**HARRIS**  
Quality Flooring since 1898.

## BondWood



**81.8% Thicker—  
Refinish More Times**  
Can be refinished countless times. A full 5/16" of wearing surface — 81.8% thicker than 1/2" laminated block, because BondWood has no tongue or groove.



**Exclusive Adhesive—More Stable**  
Exclusive adhesive and unique construction — grain direction changes every 4" — makes this the most stable parquet any prospect ever stepped on!

## New products



**Glass fire screens** are discounted by Thermo-Rite to builders who will display them in their model homes. The screens have heat-tempered glass set in brass frames, seal off smoke and drafts from the fire box. Damper is integral with the base. Standard models range in size from 24" to 50" wide, 22" to 33" high; in retail price from about \$70 to \$95. Models with two and three sides also available.

Thermo-Rite Mfg. Co, Akron.

For details, check no. 34 on coupon, p 214



**Aluminum roof jack** gives 50 sq in. of free area, enough to handle any kitchen ventilating fan. It can be used with ducts 10" x 10" or 10" in diameter. Base is one piece with turned-up flange to prevent leakage. Water deflecting shield keeps out wind-driven rain. Aluminum damper prevents backdrafts. Profile is low—7 3/8"—to blend with roof line.

Leigh Building Products, Coopersville, Mich.

For details, check no. 35 on coupon, p 214



**Budget glass door** from Ador has decorative hardware, optional single or double glazing. Door has top-hung full-frame screens, adjustable nylon sheaves, sloping threshold complete with stucco trim. Lights take 3/16" or 1/4" single or 5/8" double glass in vinyl glazing bead. Door handle includes flip latch or can take a low cost keyed lock. Doors are 6'9" high, 5'10 1/2" or 7'10 1/2" wide.

Ador Sales, Fullerton, Calif.

For details, check no. 36 on coupon, p 214



Harris Manufacturing Co., Dept. HH-98, Johnson City, Tennessee  
Please send us your free color brochure and actual photograph of Harris BondWood.

Firm Name \_\_\_\_\_

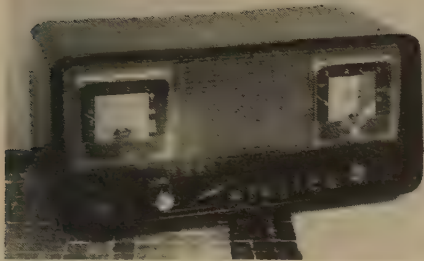
Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_ By \_\_\_\_\_

Swiss in origin. Exclusively manufactured in U. S. by Harris Manufacturing Company, Johnson City, Tennessee



## New products



**Electronic storm warning** can spot a tornado 40 miles away, sound a warning beep an hour before it hits. Severity of electrical discharge in the area is shown on a 1 to 10 scale on the face of the device. As a tornado forms, the needle rises until (at about 8) a beep sounds loud enough to wake a sleeper, at 10 a loud steady tone takes over. The device is also a high quality six-tube AM radio, usable whether or not the alarm is on.

Sferics, Inc. San Antonio.

For details, check no. 37 on coupon, p 214



**Foam insulation snaps on** for quick and easy installation. Urethane foam insulates between -200F and +250F, is best for refrigeration or low-pressure steam. Urethane is clean and safe to handle, weighs only 3 lb per cu ft, has a K factor of 0.29. Product has a factory-applied moisture barrier, and can be further weatherproofed. Also comes in special preforms or in flat blankets.

Allied Chemical, New York City.

For details, check no. 38 on coupon, p 214



**Cellular rubber insulation** comes in 5' lengths to slip on pipe or to be slit and glued on. The soft flexible tubing may be had in wall thicknesses of 3/16", 1/4", 3/8", 1/2", and 3/4" for standard pipe diameters from 3/8" to 4 1/8". Rubatex is light, durable, fire resistant, proof against UV light, water, vermin, and rot.

Great American Ind, Bedford, Va.

For details, check no. 39 on coupon, p 214

## They may look alike, but...



There's  
only  
one

# ORANGEBURG® *Brand!*

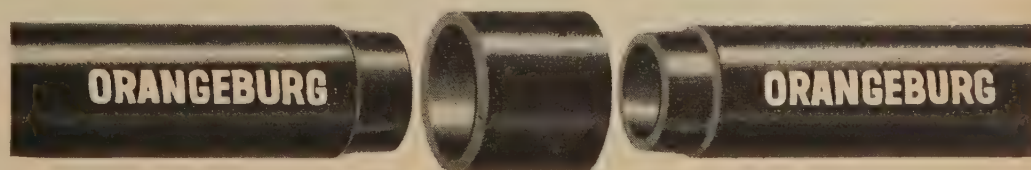
Like black cats, all bituminous pipe may look alike . . . but there's only *one* genuine Orangeburg.

It's the quality not the color that has made Orangeburg *THE* brand name in bituminous pipe.

Be sure you deliver Orangeburg *quality* on every job you install. It's your assurance of satisfied customers.

Experience shows that famous brands are the best, year after year, because they give you highest quality. Whenever you buy Orangeburg make sure you get the *genuine*. Look for the name "Orangeburg" on pipe and fittings.

ORANGEBURG MANUFACTURING CO., INC., Orangeburg, N.Y., Newark, Calif.



ADVERTISED IN  
**LIFE**



**Exclusive Orangeburg Fittings**, featuring Taperweld Joints, simplify installation.

continued on p 194



# Only Vue-Lume®

gives  
you  
this:



## A COMPLETE SERIES OF QUALITY ROLLING GLASS DOORS

UNCONDITIONALLY GUARANTEED  
FOR TWELVE YEARS!

*Decorator handles and unequaled PermaSatin heavy alumilite finish for gracefulness and eye-appeal. The exclusive AP (All Points) Weatherseal that insulates like a refrigerator door assures year-round climate control.*

Full Freight Allowed on  
8 or more units



SHOWER DOOR COMPANY OF AMERICA  
Dept. HH-958,  
1 Permalume Place, N.W., Atlanta 18, Ga.

Please send literature on Vue-Lume Rolling Glass  
Doors

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Company \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

### Vue-Lume Bon Air

#### FIXED-SLIDER SERIES

12 Standard widths from 6' to 24', and 2 standard heights; 6'10" and 8'. In 0X/X0, 0X0, and 0XX0 models.

### Vue-Lume DeVille

#### MULTI-SLIDER SERIES

12 Standard widths from 6' to 24', and 2 standard heights; 6'10" and 8'. Two, three, four or more tracks. POCKET MODELS IN ALL SIZES.

### Vue-Lume Del Rio

#### FOR DUAL GLAZING

6 Standard widths from 6' to 20' in Standard 6'10" height. Special sizes and arrangements as requested. Accommodated 1" insulated glass.

## New products



**Package pool goes in fast.** Heck Bros of Indianapolis used the materials in the lower photo to make the pool above in just under nine working hours—35 man hours—of which half was spent excavating and grading the hole. The Buster Crabbe Pool is made of prefabricated, chemically impregnated panels, bolted together at the site, and lined with vinyl. The one above is 16' x 32', with a 7½' deep diving end, cost just under \$2,000 to buy and install; the 30' x 30' patio and accessories boosted total to \$3,800.

Cascade Pools, Inc., Trenton, NJ.

For details, check no. 40 on coupon, p 214

**New safe contact cement** from 3M's Midcontinent division is flameproof and odorless, bonds plastic laminates, plywood panels, wallboard, wood veneer, plaster, and canvas. Roltite is soluble in soapy water for easy clean-up while still wet but is water resistant when dry. It is also resistant to oxidation, oils, greases, and most household chemicals. It can be rolled, brushed, or sprayed.

Midcontinent Adhesive, Grove City, Ohio.

For details, check no. 41 on coupon, p 214



**Cabinets of steel and plastic** look like wood. Marlboro maple units are made of heavy gauge steel but are finished inside and out with woodgrain melamine laminates. Cupboard model fits a 24" base cabinet, has spice shelf and double laminated doors. China cabinet fits a 30" base, has sliding glass doors, chrome cup rack, 2-way electrical outlet, spice rack.

Maine Mfg Co, Nashua, NH.

For details, check no. 42 on coupon, p 214

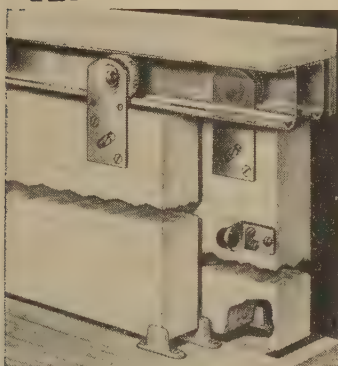
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HOUSE & HOME



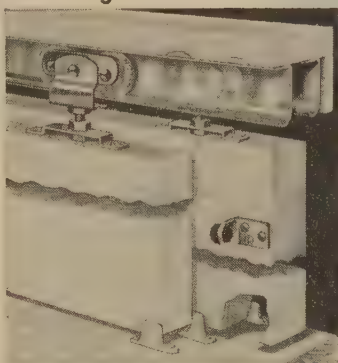
# National SLIDING DOOR HARDWARE

*The Smoothest in Movement*



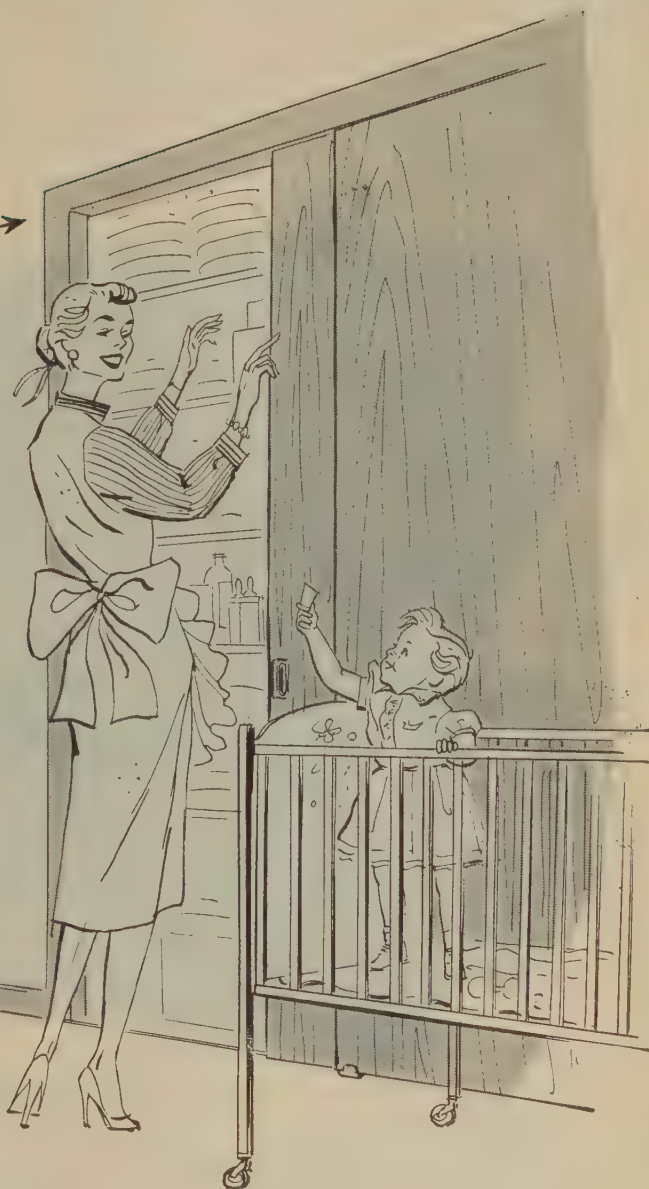
No. 182 Single Wheel Hanger

Nylon wheel  $1\frac{3}{8}$  inch in diameter with solid steel axel. Never requires lubrication. Slotted screw hole for vertical adjustment.



No. 185 Two Wheel Hanger

Two Nylon wheels  $1\frac{3}{8}$  inch in diameter. Constructed so that weight of doors is distributed over the whole axel. Vertical adjustment feature.



The modern sliding doors that by-pass each other or slide into their own recessed pocket are a neat, efficient and space saving innovation for the home, the office or the factory. Ideal for clothes closets, supply and storage cabinets or for room dividers.

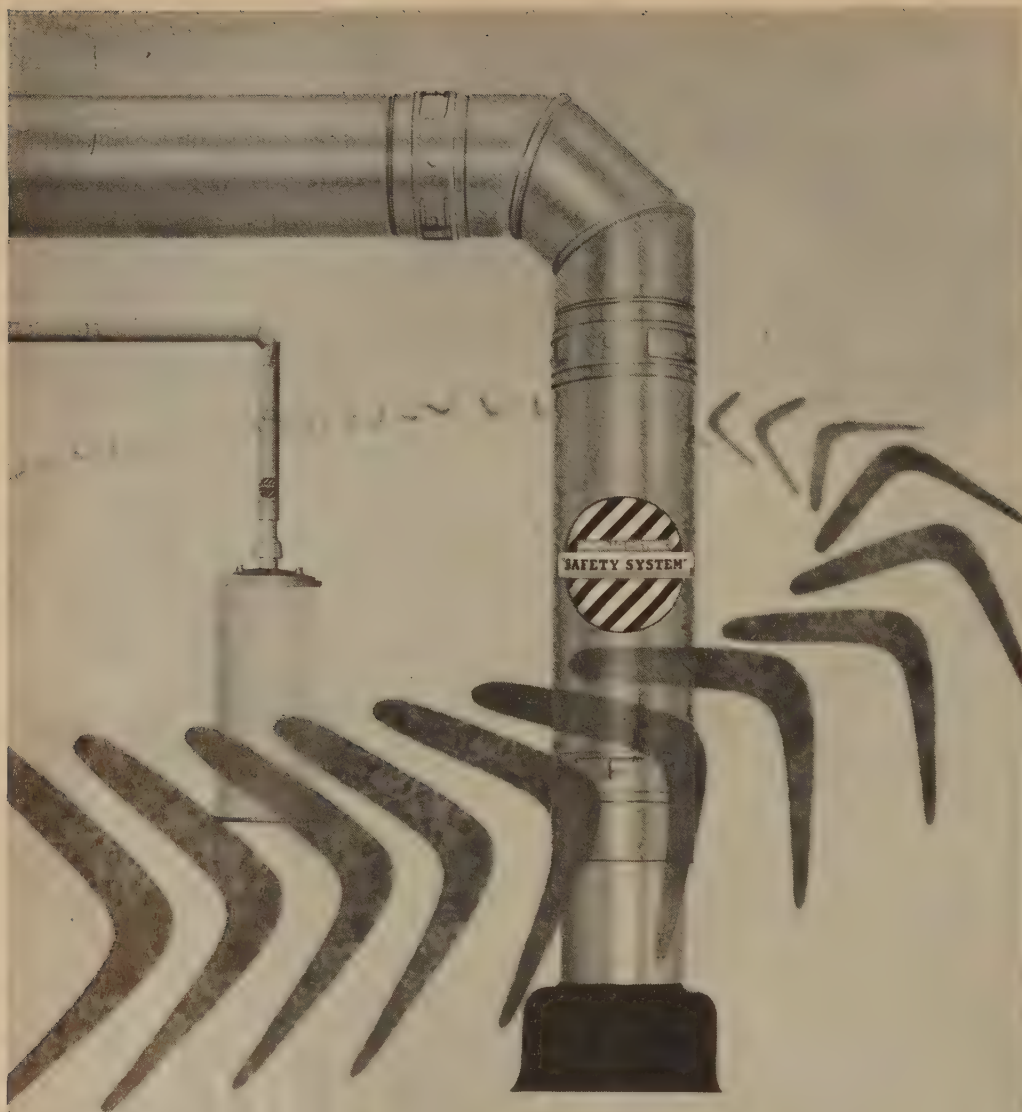
Either one of the above two hanger styles and the specially designed No. 180 Rail will serve every thickness of door from  $\frac{3}{4}$  inch to  $1\frac{3}{4}$  inch. Rail is hot galvanized to prevent rust and is available in 44-inch, 56-inch, 60-inch, 68-inch and 92-inch lengths. Rail is adjustable. For further detailed information send for illustrated brochure.

*National*

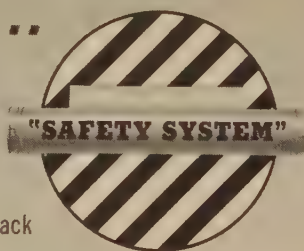
MANUFACTURING COMPANY

Sterling,  
Illinois





## Your gas installations can't boomerang... with this seal

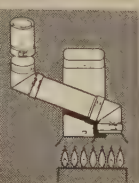


Gas vent failures can "boomerang" back to harm your quality reputation as a builder... when polluted, stale air and condensation damage appear in the homes you've sold.

The Metalbestos "Safety Seal" is your protection against gas vent failures and customer complaints... because it means that an all-Metalbestos vent has been installed according to the scientifically developed Metalbestos "Safety System" Gas Vent Tables.

Learn why the new Metalbestos "Safety System" lowers vent installation cost... meets every gas vent problem. Write Dept. D-9.

Stocked by principal distributors in major cities. Factory warehouses in Akron, Atlanta, Dallas, Des Moines, Chicago, New Orleans, Los Angeles, Woodbridge, N. J.



**METALBESTOS** DIVISION  
WILLIAM WALLACE COMPANY · BELMONT, CALIF.

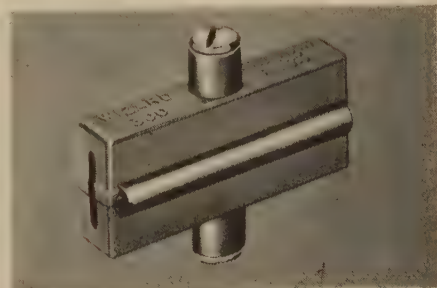
## New products



**Recessed wall heaters** from Circle-Air are electric convection units of 500 to 3,000 w with outputs up to 10,000 Btu. By mounting "black-heat" elements back to back within a double-walled heating compartment, company claims to get equal Btus from a unit 50% smaller than the industry standard as well as more usable Btus per kilowatt. Thermostat controlled. UL approved.

Circle-Air Industries, Brooklyn.

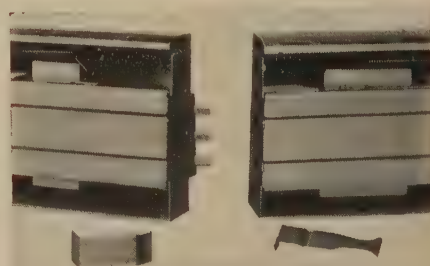
For details, check no. 43 on coupon, p 214



**20 TVs on one antenna** are claimed for the new Wizard 300 TV-FM coupler designed for row houses, motels, apartments, etc, or for multiple outlets in a single house. Electromagnetic coupler simply slips on antenna lead, requires no direct electric or mechanical connection. Makers claim this type of coupler does not reduce the signal delivered to each set, receives as clear a picture as a separate antenna.

Charles Engineering, Los Angeles.

For details, check no. 44 on coupon, p 214



**Plug-in perimeter heaters** can be assembled to make any length of baseboard heater desired. Units include a thermostat or starter section, heater sections (as needed), inside corner sections. Current connects through thermostat section. Tandem 500 units draw low wattage per foot—143 w—and have low surface temperature—113F—to be safe for small children. Completely pre-wired.

Meier Electric & Machine, Indianapolis.

For details, check no. 45 on coupon, p 214

continued on p 198

HOUSE & HOME



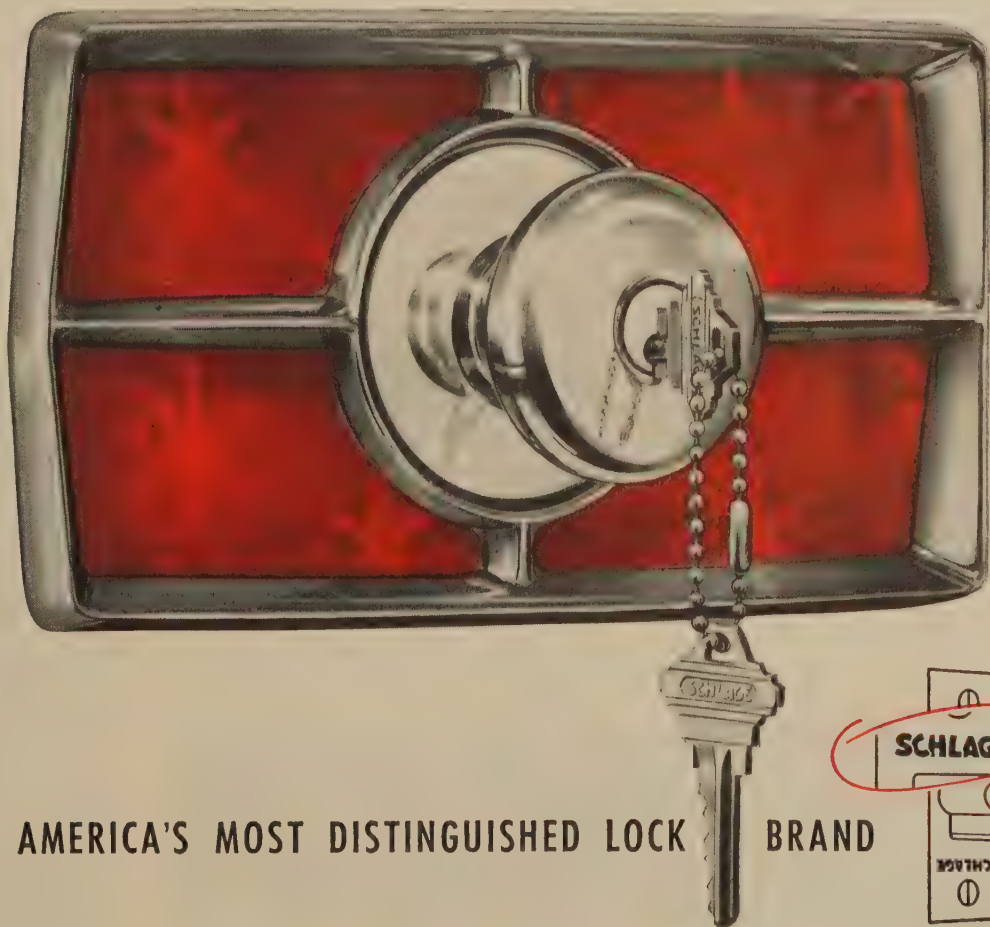
# What this **SCHLAGE** entranceway tells prospects about your homes

Your selection of Schlage hardware is a silent testimonial to you.

Your appreciation of Schlage styling and craftsmanship elevates you above the crowd, a builder who uses the finest materials.

Your application of the striking Schlage five-inch backset and escutcheons marks you as a modern builder, a man who knows how to appeal to decorating-conscious women.

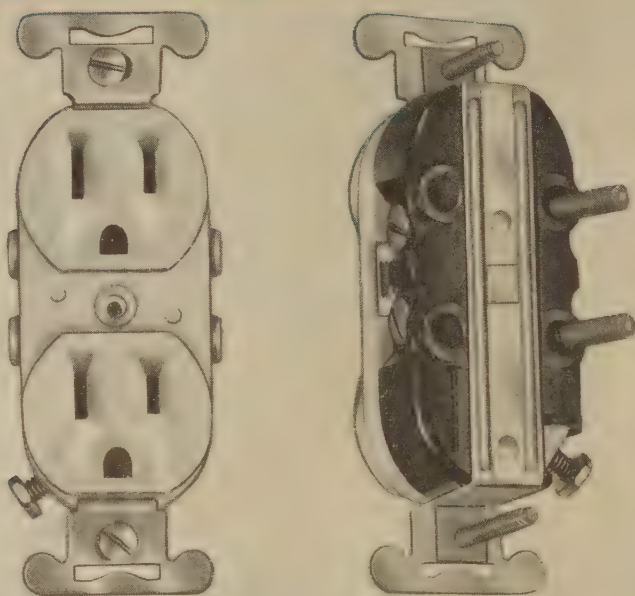
For our part, we are helping the public to appreciate the dependability and integrity of Schlage locks — and the builders who use them — with full-page, full-color national advertising in magazines like Better Homes & Gardens. Let us help you merchandise and sell your homes. Contact your Schlage representative for details or write Dept. BA-9, P. O. Box 3324, San Francisco 19. Schlage Lock Company... San Francisco... New York... Vancouver, B. C.



AMERICA'S MOST DISTINGUISHED LOCK BRAND



**NOW! Leviton adds  
back and side wired  
devices to the specification  
(5000) grade line!**



No. 5096  
Duplex U-Ground  
Parallel receptacle

**LOOP IT OR DO IT THE EASY WAY!** Leviton back-and-side wired devices give you a connection that is not only easy to make, but time-saving, too! Loop it, or clamp it for back-wiring. Either way you are assured the right kind of power to carry heavy duty loads. Here is the utmost in performance at minimum cost...with absolutely no compromise in quality!

Back-and-Side Wired  
Devices Now Available:  
Rated 15A.—125V.  
(No. 5089 15A.—250V.)



No. 5062



No. 5074



No. 5088



No. 5089

#### Just Check These Features:

- All devices have double-wiping phosphor bronze contacts.
- Plaster ears—wide and break-off types.
- Grounding Screws on all U-Ground devices.
- Entire assembly solid-riveted for permanence.
- Heavily sectioned molded phenolic bases.
- Full underslung straps, completely rust-proofed.
- Easy back-wired installation for up to No. 10 wire.
- Strip gauge for obtaining maximum clamping.
- Individually packed with mounting screws attached to straps.

Meet U. L., C. S. A., and Federal Specifications  
All back-and-side wired devices in brown and ivory.

Your best jobs are done with...  
**LEVITON MANUFACTURING COMPANY, INC.**  
Brooklyn 22, New York

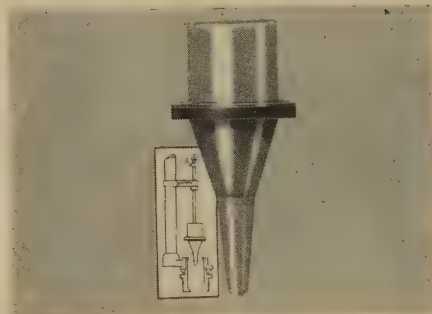
Listed by Underwriters' Laboratories

**LEVITON**

Chicago • Los Angeles • Leviton (Canada) Limited, Montreal

For your wire needs, contact our subsidiary AMERICAN INSULATED WIRE CORP.

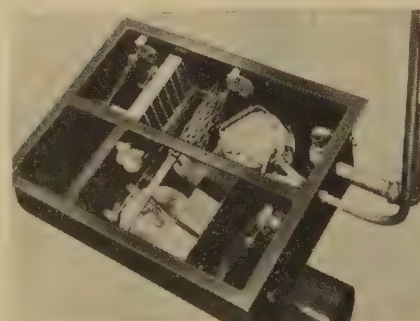
## New products



**Sure-fit tank ball** has a long tapered stem to guide the valve into valve seat. Ball is one-piece polystyrene. Neoprene foam gasket assures full closure even with an eroded valve seat. Bronze swivel lets valve ball move freely and seat true even if lift wire is off center. Ball fits any toilet, can be installed in seconds. Price retail, \$1.49.

Kinnard Inc, Little Falls, NJ.

For details, check no. 46 on coupon, p 214



**Flood protection** during heavy rains is provided by this Eveready unit inserted in main house waste line. When sewer backs up, valve shuts off lower compartment in picture above, preventing sewage from entering house system. But high pressure pump (it will move 3,300 gal per minute against a 10' head) forces household wastes into flooded sewer so plumbing can continue to be used while flood conditions last. Control shows if unit is on.

United Pre-Cast Concrete Co, Chicago.

For details, check no. 47 on coupon, p 214



**Budget priced disposer** is newest National continuous-feed model, is designed for simple installation. New thick rubber ring between sink and disposer holds machine without vibration. Split-ring construction lets top housing swivel from motor unit during installation. Electrical outlet and cable connector are built in, complete with pigtailed. Unit has new stainless alloy blades, 1/3 hp motor.

National Rubber Machinery Co, Akron.

For details, check no. 48 on coupon, p 214

continued on p 200

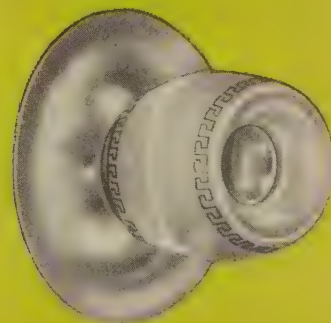


*an  
individual  
styling  
touch*

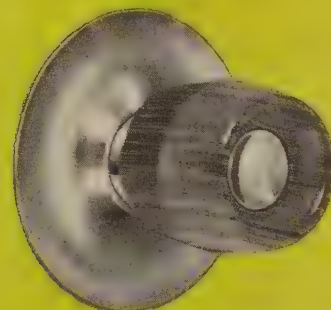
*for  
your  
new  
homes!*



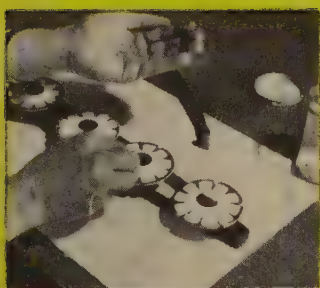
BRIARCLIFF rose no. 439FB with Chalice knob design — one of five hand-decorated rose patterns fashioned in Corbin Fyre-Finish vitreous metal enamel.



MOTHER-OF-PEARL finish with hand-painted Black Frieze on Melody design ceramic knob. Also with Gold Flame decoration and Chalice design ceramic knob.



STRATAWOOD (horizontal grain) no. 411-SH with Melody knob design. Other hand-turned knobs in Stratawood (vertical grain), Cocobolo and Rosewood.



## CORBIN hand crafted locksets

Something really different in door decor that puts *individuality* into every home you build! Sculptured, petal-like roses with an exquisitely feminine touch . . . hand-painted ceramic knobs blended perfectly with rich, harmonizing metals . . . knobs in rarewoods, each hand-turned for truly unique grain effects. All these locksets reflect the skillful use of modern decorator materials and hand-crafted artistry by Corbin. Each is an *individual* creation from the Defender lock line — at a modest price. See them now at your Corbin dealer. Or write direct for details. P & F CORBIN Division, The American Hardware Corporation, New Britain, Connecticut.

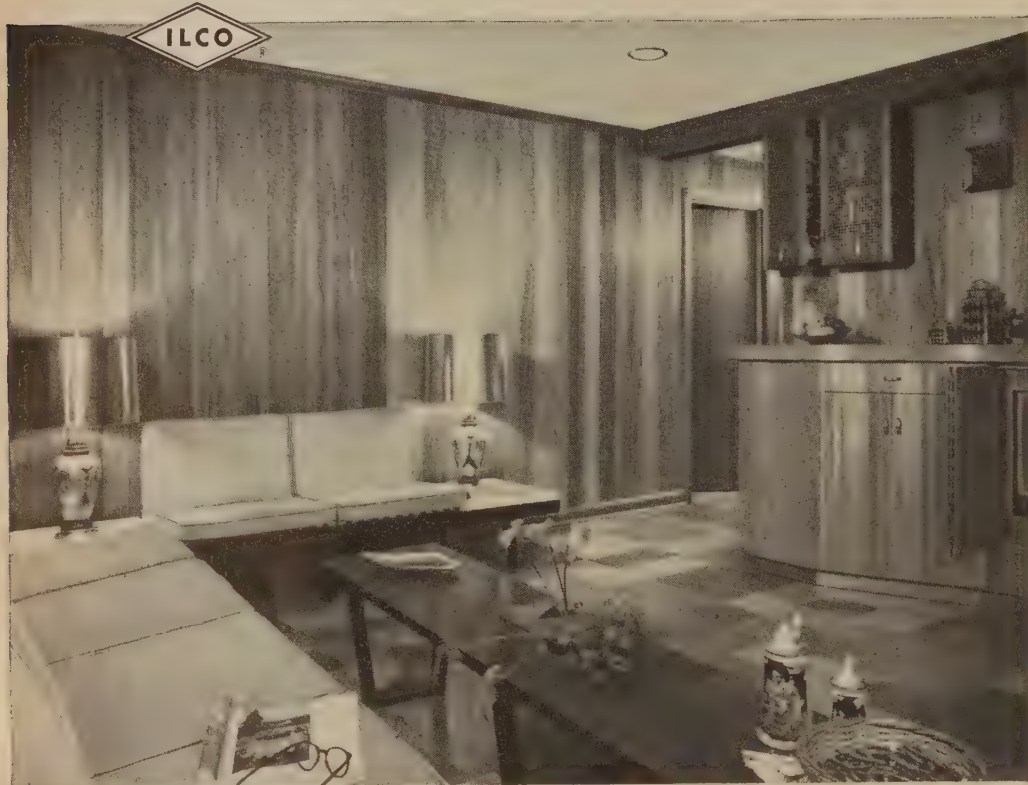
GOOD BUILDINGS DESERVE CORBIN HARDWARE





from Insular . . .

## Philippine Mahogany surfaced lumber that can be finished without preparatory sanding



Since Ilco is solid hardwood—not plywood or veneer—each piece has its own pleasing growth characteristics, grain patterns, highlights and shadows, each is one of Nature's signed originals.

**Ease of finishing** — When you specify Ilco Philippine Mahogany, you eliminate a costly step in the finishing process. Because of superior milling, Ilco's remarkably smooth surfaced lumber requires no sanding. And this superb solid hardwood takes all types of finishes easily.

**Scientifically kiln-dried, then graded** — All Ilco lumber is scientifically dried in the company's own kilns at the Orient's largest and most modern mill. Kiln drying increases fiber strength, substantially improves stiff-

ness and hardness, as well as bending and compressive strengths, and causes the wood to be more easily worked. Grading after drying assures full count and finest quality.

**Widest selection** — Ilco, oldest and largest Philippine lumber exporter, has the widest selection of milled products. Choose from three types of paneling and an extensive variety of moldings. And remember, it's most important to insist on fine Ilco moldings, for no other can so subtly complement Ilco paneling's warm beauty.

### PANELING • SIDING • MOLDING • FLOORING • TRIM • ROUGH AND SURFACED LUMBER

Order from the distributor nearest you

#### UNITED STATES

**ALABAMA—Montgomery**  
Germain Lumber Corporation  
—**Birmingham**  
Griffith-Coker Lumber Company, Inc.  
**CALIFORNIA—San Francisco**  
Davis Hardwood Company  
—**Los Angeles**  
Mahogany Importing Company  
**COLORADO—Denver**  
Frank Paxton Lumber Company  
**ILLINOIS—Chicago**  
Frank Paxton Lumber Company  
Columbia Hardwood Lumber Company  
**INDIANA—New Albany**  
Chester B. Stem, Inc.  
**IOWA—Des Moines**  
Frank Paxton Lumber Company  
**LOUISIANA—New Orleans**  
Dixie Lumber Company

**MASSACHUSETTS—Charlestown**  
Winde-McCormick Lumber Company

**MISSOURI—Kansas City**  
Frank Paxton Lumber Company

**NEW MEXICO—Albuquerque**  
Frank Paxton Lumber Company

**NEW JERSEY—Camden**  
Du Bell Lumber Sales Company

**NEW YORK—Brooklyn**  
Anchor Sales Corporation  
Black & Yates, Inc.

—**Eden (P.O. Box 478)**  
Griffith-Coker Lumber Company, Inc.

**NORTH CAROLINA—Greensboro**  
Brown-Bledsoe Lumber Company

**PENNSYLVANIA—Philadelphia**  
Fessenden Hall Plywood, Inc.

—**Pittsburgh**  
Germain Lumber Corporation

**TEXAS—Fort Worth**  
Frank Paxton Lumber Company  
**WASHINGTON—Seattle**  
Matthews Hardwoods, Inc.

#### CANADA

**ALBERTA—Edmonton**  
Fyfe Smith Hardwood, Ltd.

—**Calgary**  
Fyfe Smith Hardwood, Ltd.

**BRITISH COLUMBIA—Vancouver**  
J. Fyfe Smith Co., Ltd.

**ONTARIO—Toronto**  
Robert Bury & Co. (Canada) Ltd.

**QUEBEC—Montreal**  
Robert Bury & Co. (Canada) Ltd.

#### HAWAII

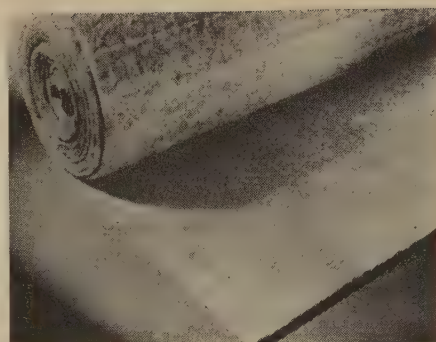
**HONOLULU**  
American Factors, Limited  
Shuman Hardwood Lumber Company

If none of these distributors is near you, write us direct

## INSULAR LUMBER SALES CORPORATION

1405 Locust Street, Philadelphia 2, Pa.

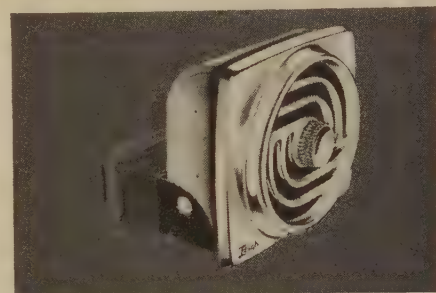
## New products



**Flexible duct liner** provides thermal and sound insulation for hot or cold air ducts without reducing air flow. Fiberglas mat-faced liner has friction coefficient of only .017 to .020, making it unnecessary to correct for head loss by oversizing ducts. The liner can be used efficiently with air velocities up to 4,000 fpm. Liner comes ½" or 1" thick, 24", 36", or 48" wide, in 100' and 200' rolls.

Owens-Corning, Toledo.

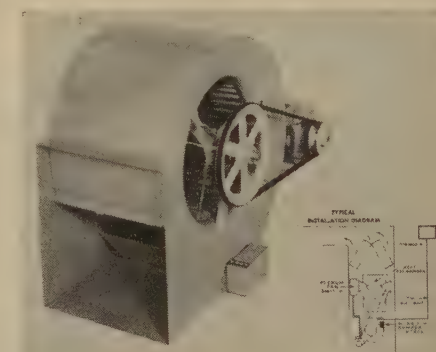
For details, check no. 49 on coupon, p 214



**New ventilating line** by Leigh Products includes wall (above) and ceiling kitchen exhaust fans, fan and fan-light bath combinations, single and double blower range hoods. Multi-position fans can be installed flat or vertical with Leigh extension ducts, all have 9-blade fans, easily demounted motor and fan assembly. All are designed for easy installation.

Leigh Building Products, Coopersville, Mich.

For details, check no. 50 on coupon, p 214



**Dual purpose blower** works with both heating and cooling phases of year-round conditioning systems. Du-Air is controlled by wall thermostat, switches automatically from heating to cooling and back as demand changes. Eliminates need for pulley changes, separate fans, two-speed fans, motor-operated dampers. Low-voltage controls draw only 24 volts. Four Du-Air models are available. /END

Morrison Products, Cleveland.

For details, check no. 51 on coupon, p 214



*Install the finest...*

FARLITE DECORATIVE PLASTICS ease your house selling problems. No other surface offers such crisp, clean, sparkling beauty and durability. Use it for countertops, for walls in bathrooms, playrooms, nurseries, entrance halls, etc. Select from woodgrains, marble, or over a hundred other wonderful patterns and color combinations . . . in sheets, built-up panels, or new 5/32" Farlbord. Farlite high-pressure laminates clean with a damp cloth . . . resist scratches, stains, heat, fruit acids.



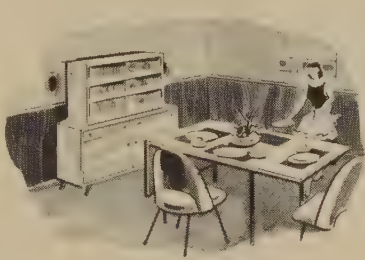
the very best in . . .

**HIGH PRESSURE PLASTIC LAMINATES**



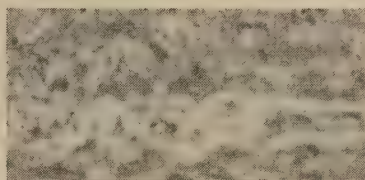
**FOR KITCHEN COUNTERTOPS**

Crisp, clean, glass-smooth Farlite resists stains, heat, fading . . . stays beautiful and carefree without attention for years!

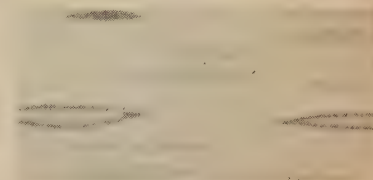


**FOR WALL SURFACING**

Lasting beauty that never needs refinishing . . . and there's a pattern and color just right to suit any decorating theme!



TRAVERTINE MARBLE



TRANQUIL

Write today for the latest details on using Farlite in your building plans!

PLASTICS DIVISION

**FARLEY & LOETSCHER MFG. CO.**  
DUBUQUE, IOWA

B-20

**\$452<sup>10</sup>\***

## FINE MASONRY WITHOUT PRICE PENALTY

\*National average, including planters, excluding garage. May vary by locality. Blueprints of house shown, \$15.00.



\$452.10 for all the 8" Brikerete required for the walls of the basic "Brikadier," shown above, is only an example of Brikerete economy. The same sq. ft. price applies to any building—residential, commercial, industrial.

Brikerete has particular appeal to those who build to sell, as it enables the offering of masonry homes—to a masonry-minded public—at prices competitive to those of frame. Greater profit potentials.

Local manufacturing is the reason for Brikerete's low prices. Factory-to-builder operations eliminate the tolls taken by freight and middlemen. Brikerete truly betters the building and lowers the cost. Write for Brikerete Book No. 1 and name of nearest plant. No cost—no obligation.

## BRIKRETE

World's most modern masonry. Contains no clay. Made of hard, sharp minerals, bonded by Portland cement. Formed cold—not baked nor burned. No warping or distortion. Range of 14 colors. Two thicknesses—8" and 4"; two heights—3½" and 2¾". All 12" long. Hollow design.

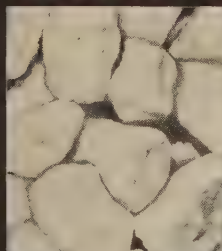
BRIKRETE ASSOCIATES, INC., 416 W. 25th St., Holland, Mich.

### MANUFACTURING TERRITORIES OPEN

More local plants are needed to supply increasing demand. Brikerete is truly an outstanding community enterprise, with plants operating in franchise-protected territories and backed by extensive sponsor cooperation. Broad sales possibilities and high income potentials. Equipment available on long-term payments to responsible operators. Ask for Brikerete Book No. 2.

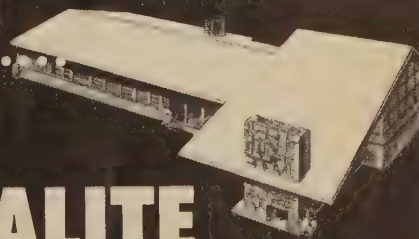


REDUCE AIR CONDITIONING EXPENSE WITH



Actual Size of Aggregate

*Bondable, Low Cost,  
Whitest White*



## CRYSTALITE

**Highly Reflective Marble  
WHITE ROOFING AGGREGATE**

Sparkling white Crystalite makes a beautiful built-up roof . . . and it's approved for bonding by leading roofing material manufacturers. Crystalite is a hard, nonporous limestone marble. It will not crumble, deteriorate or change color. Because of its heat reflective properties, air conditioning expense is greatly reduced. Crystalite looks expensive yet costs very little more than the cheapest aggregates, and saves on handling expense. It is clean, dry and ready to use.

Write for Complete Information, Samples and Prices

**BLACK WHITE LIMESTONE CO.**

Front and Eighth Street, Quincy, Illinois





Designed and engineered by McQuay, and suitable for all fuels, (Type A) this new package chimney has a 7" stainless steel flue with aluminized steel interliner and outer casing. The interliner is supported by the exclusive McQuay stainless steel tension spring spacers for strength, rigidity and durability.

This McQuay thermo siphon design permits quick drafts and even temperatures from top to bottom for peak efficiency. There is nothing to deteriorate, nothing to collect soot. Roof housing is large, measuring 16" x 20" with a 20" x 24" cap.

For the best results, and for greatest economy, recommend and use this McQuay package chimney on every job. Territories are now being assigned. Write McQuay, Inc., 1608 Broadway Street N.E., Minneapolis, Minnesota.

### Meets the Original and More Severe Underwriters' Laboratories Standards 103, March, 1956



**ECONOMY**—Costs from one-third to one-half as much as brick installed. All pre-assembly has been done to eliminate costly on-the-job time and labor.

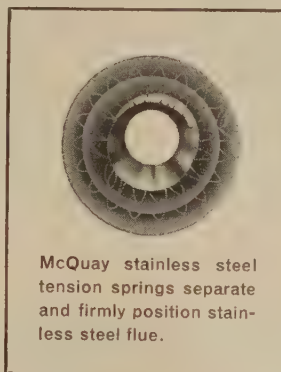
**SAFETY**—Listed under the re-examination service of Underwriters' Laboratories, Inc., and on the approved list of F.H.A. and V.A.

**QUICK AND EASY INSTALLATION**—Average installation time is less than one hour after openings are prepared.

**LONGEST SERVICE LIFE**—Flue is of stainless steel to permanently withstand effects of combustion gases. Starter box and starter sections are in one unit. Standard 24", 18" and 12" sections give any desired length.

**LIGHT WEIGHT**—Load on support joists is only 9 pounds per foot of chimney length.

**SHIPPED COMPLETE**—with easy-to-follow instructions for installing. Units are individually packaged.



### Do you need air conditioning?

The ARI has spelled out how much the US needs it in a new 26-page booklet treating the need for air conditioning in industry, business, health, defense, home. The booklet is distributed free to ARI members, government departments, libraries, and is available to the general public for 75¢.

Air-Conditioning & Refrigeration Institute, Washington, DC.

For copy, write direct to the institute

### Where to use epoxy resins

Shell Chemical Corp, a leading producer of epoxies, tells of many new uses for this strong bonding adhesive and encapsulating medium in a 24-page booklet, "New Horizons for Epon Resins." Most of the uses discussed are not directly applicable to home building but do suggest the wide range of uses for these new glues.

Shell Chemical Corp, New York City.

For copy, check no. 53 on coupon, p 214

### "Family proof" plywood paneling

That is what Georgia-Pacific calls the new hard finished plywood described and shown in a new 12-page four-color booklet. Photos show colors and typical uses.

Georgia-Pacific, Portland, Ore.

For copy, check no. 54 on coupon, p 214



### Dow tells latex paint story

Dow Chemical, major producer of synthetic latexes for the paint industry, has just issued a 20-page account telling "Why and Where to Specify Latex Paint." This booklet, for the first time, tells architects and builders what latex is, how it should be used in paint, how it performs on interior walls, what latex colors look like, how it performs on exterior walls, types of finishes, where and where not to use it, how to work with it. The booklet ends with a highly informative glossary of painting terms.

Dow Chemical, Midland, Mich.

For copy, check no. 55 on coupon, p 214

### How to keep air dry

"Facts about Dehumidification" gives a lot of question and answer information about moisture control; what the problems are and what type and size of dehumidifier to use. Six-page pamphlet covers both home and shop dampness control.

Abbeon Supply Co, Jamaica, NY.

For copy, check no. 56 on coupon, p 214

### 25 home decorating ideas

A large format four-color brochure from US Plywood tells how to use Westinghouse's plastic laminate Micarta. Suggestions include ideas for kitchens, baths, and living areas. Tips for use on furniture, too.

US Plywood, New York City.

For copy, check no. 57 on coupon, p 214

continued on p 204





Kegley, Westphall  
& Arbogast,  
Los Angeles,  
California

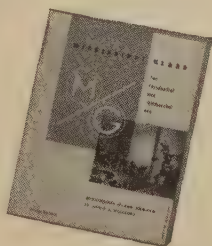
**A GRACEFUL  
ENTRANCE  
OPENS THE  
DOOR TO SALES**

Home buyers appreciate the first impression they receive from a doorway made distinctive with figured glass. Note how this simple use of Mississippi Broadlite adds a touch of luxury that sells on sight. Greet your prospects with glamor and gain sales. Use translucent, light diffusing glass by Mississippi to add eye appeal that pays off in greater buy appeal.

Glass does so much to any home to make it more attractive . . . floods interiors with flattering "borrowed light" . . . makes rooms seem larger, friendlier, more desirable.

Give your homes the extra sales appeal that only glass can add. Buyers want that "different look." See your nearby Mississippi Glass distributor and select from a wide range of patterns and surface finishes that can enhance your homes.

WRITE TODAY FOR FREE CATALOG.  
ADDRESS DEPARTMENT 9.



**MISSISSIPPI  
GLASS COMPANY**  
88 Angelica St. • St. Louis 7, Missouri  
NEW YORK • CHICAGO • FULLERTON, CALIFORNIA

# The finishing touches that make sales!




*Now in Our 60<sup>th</sup> Year*

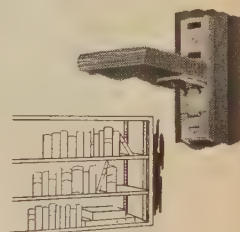
## Adjustable Shelf Hardware

Open wall or built-in shelves have a tremendous appeal to today's home-buyers. With sturdy, attractive, low-cost K-V adjustable shelf hardware, they can be installed quickly, easily and economically. Adjustable shelf hardware is another quality K-V product that adds those finishing touches that help make sales.

### FOR BUILT-IN SHELVES

Perfect for built-in shelves constructed to last the lifetime of a house. Can be mounted on surface or flush. Shelves can be quickly adjusted, easily aligned. No. 255 standards come in 24 inch to 144 inch lengths.

No. 255 Standard, No. 256 Support



### FOR OPEN WALL SHELVES

These sturdy standbys are available in satin anachrome or brushed brass finish. They add smartness to any room and provide excellent storage space on open walls. Standards available in 18 inch to 144 inch lengths; brackets in 4 inch to 20 inch lengths.

80 Standard, No. 180 Bracket

### FOR EXTRA HEAVY DUTY

Best on the market for heavy-duty installations. Recommended for heavy storage in homes or for paint, hardware or grocery stores or for hangrod installations. Standards available in lengths of 36 to 144 inches, brackets from 12 to 24 inches.

No. 87 extra heavy-duty standard  
No. 187 extra heavy-duty bracket



Ask your jobber or K-V sales representative about the popular packed units of K-V 80-180 standards and brackets and K-V 233-239 standards and supports.



**KNAPE & VOGT MFG. CO.**  
Grand Rapids, Michigan



# compare **PM** with any other type of vapor seal on the market!

**ONLY \*PM OFFERS  
ALL OF THE  
FEATURES  
NECESSARY TO  
PROVIDE A TRUE,  
IMPERMEABLE  
VAPOR SEAL  
AGAINST MOIS-  
TURE MIGRATION.**



COMPARE the strength... "PM" maintains its permeance rating even after being subjected to the pouring of aggregate, trundling of wheelbarrows and installation foot traffic. Resists rupturing and tearing. How many other materials will perform like this? COMPARE the ease and speed of providing a permanent installation... "PM" may be laid directly over the tamped grade or fill. Ideal for all types of construction; basement, crawl-space and slab-on-grade.

We sincerely advise and invite your comparison of "PM" against all other "so called" vapor barrier products on the market... before you specify or install your next vapor seal be sure it meets these Sealtight standards of quality: permeance rating of only .0066... resistant to rot, mold and termites... strong enough to resist puncturing... expandable... quickly, easily installed... only "PREMOULDED MEMBRANE" meets them all. "PM" is actu-

ally the most economical vapor seal on the market when you consider the reduced maintenance and redecorating costs realized through the complete elimination of moisture migration into the structure. COMPARE the permeance ratings... as you can see by the chart below, "PREMOULDED MEMBRANE" is over 16 times more impermeable than the next ranking material.

MATERIAL	WATER VAPOR TRANSMISSION (in *perms)
"PREMOULDED MEMBRANE"	.0066
Polyethylene Film (.004 in. thick)	.097
55 pound roll roofing	.030
Duplex paper (coated both sides reflectors material, reinforced)	.304

\*PERMS—grains per square foot per hour per inch of mercury difference in vapor pressure at standard test conditions.

## SEALTIGHT®

### PRODUCTS

- "PREMOULDED MEMBRANE" Vapor Seal
- "HYDROMAT" Asphalt Liners
- "DURAJOINT" PVC Waterstops
- "CORKTITE" Perimeter Insulation
- PAVING PRODUCTS: Expansion Joints, Center Strip, Hot and Cold Rubber Asphalt Seal, Hot and Cold JFR Joint Seal, Curing Compounds and many others.

**\*Premoulded Membrane** ...the industry's  
TRADEMARK

**only TRUE, impermeable vapor seal.**

**WRITE TODAY for complete information... request the "PM" Design Manual and series of "Tech-Tips."**

**W. R. MEADOWS, INC.**

10 KIMBALL ST. • ELGIN, ILLINOIS

### How to sell your floors

A new edition of Armstrong Cork's 48-page "How to Sell Homes Faster" is now available. The new edition tells about the latest advances in resilient flooring, how to specify flooring, how to merchandize it, how types differ. It includes four-color photos of Armstrong-floored rooms and a complete color file of Armstrong resilient floorings.

Armstrong Cork, Lancaster, Pa.

For copy, check no. 58 on coupon, p 214

### All about Arcadia windows

New 32-page catalog contains illustrations, standards, options, and complete architectural specifications for company's steel and aluminum sliding glass doors, windows, and window walls. New 102 and 104 series doors are featured.

Arcadia Metal Prods, Fullerton, Calif.

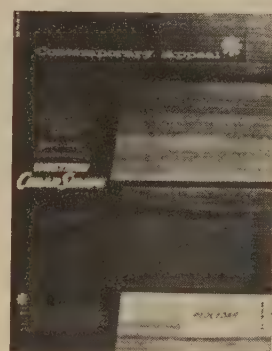
For copy, check no. 59 on coupon, p 214

### Government adhesive specs

3Ms has collected all government specifications for adhesives, coaters, and sealers in a 23-page catalog which lists 3M products that fill the requirements. The list covers uses from sealing cardboard boxes to assembling airplanes.

Minnesota Mining & Mfg, Detroit

For copy, check no. 60 on coupon, p 214



### Brochure shows cedar houses

Latest pamphlet from the Western Red Cedar Assn shows houses designed by John Ridley, George Fred Keck & William Keck, Brown & Healey, and a suburban office building by Wayne A Littlejohn. All use cedar beveled or Tee-Gee siding. Pamphlet also includes specification data on these sidings.

Western Red Cedar Lumber Assn, Seattle.

For copy, check no. 61 on coupon, p 214

### Quick check on insulation

A new illustrated chart gives U, C, and R factors for 75 thicknesses and types of insulation and various heat flow conditions. It also gives costs per sq ft to meet the heat factors. Insulation specifications of private and government agencies are also given.

Infra Insulation, New York City.

For copy, check no. 62 on coupon, p 214

### How fireproof are houses?

Technical bulletin no. 8 of the Metal Lath Manufacturers Assn gives fire ratings for structural elements, floors, partitions, roofs for almost every accepted method of construction.

Metal Lath Manufacturers, Cleveland.

For copy, check no. 63 on coupon, p 214

continued on p 206



# NEW FHA FUNDS BOOSTING BUILDING



## Save up to \$84 per house with Chase® Copper Tube!

New FHA funds—\$1.8 Billions—have given home building a much-needed shot in the arm. Already, thousands of new starts have been made. And the sales are going to the builder who makes the most *available* for the buyers' dollar, in *quality, liveability and comfort*.


Take plumbing for example. American-made Copper Tube by Chase is the top quality line—the most wanted material for a home's lifelines handling water supply, drainage and heating and cooling. You can offer LIFELINES® of Chase Copper Tube in every home you build—and save dollars from your building costs, too!

But act now—while the building season's at its height. There's no excuse for using anything less than the best—

Chase LIFELINES®—in every home you build and sell! Talk it over with your nearest Chase Plumbing Contractor today. See your nearest Chase District Office for help. Or write direct to Chase Headquarters.

**DON'T TAKE OUR WORD FOR IT!** You can have actual, dollars-and-cents proof from your nearest Chase Representative! He can give you comparative cost estimates for a complete copper tube plumbing and drainage system in a typical 6 room house, and a typical 7½ room 2-bath home—down to the last Tee. *And you'll see that copper actually costs less today to install than any rustable pipe!*

**LIFELINES® of Chase Copper Tube cost less installed... Ask for proof today!**

**Chase**   
**BRASS & COPPER CO.**  
 WATERBURY 20, CONN.  
 Subsidiary of  
**Kennecott Copper Corporation**

**FREE!** Detailed analysis of typical costs of LIFELINES® by Chase. Yours for the asking! Write Chase, at Waterbury 20, Conn.



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Atlanta Baltimore Boston Charlotte Chicago Cincinnati Cleveland Dallas Denver Detroit Grand Rapids Houston Indianapolis Kansas City, Mo. Los Angeles Milwaukee Minneapolis Newark New Orleans New York (Maspeth, L. I.) Philadelphia Pittsburgh Providence Rochester St. Louis San Francisco Seattle Waterbury





## "ILCO BEAMS AND DECK VERY WELL RECEIVED"

—says executive secretary, Saint Paul Home Builders Association

After 20,000 visitors thronged the Saint Paul Home Builders association model home, the executive secretary commented: "We received many excellent comments on the Rilco beams and wood deck used. All seemed to think it was a refreshing idea."

The designer agreed: "Only laminated beams were considered because we could not afford to have an unsightly beam in a house of this type nor could we take a chance on a timber beam checking and sagging. The laminated beams are considerably less in size for the same loading as a timber beam."

"We have always been well pleased with Rilco laminated products because they come to the jobsite in excellent condition, wrapped, ready for finish. With standard sizes you can expedite a job and have it closed-in shortly after the foundation is up."

Rilco laminated wood members are available in standard sizes, ready for immediate delivery, arriving at the jobsite ready for fast erection. And regular crews handle Rilco erection easily.

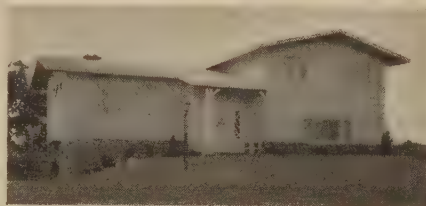
Homeowners like the low first cost, warm beauty which only wood offers plus minimum maintenance for Rilco beams mellow with age. For complete information contact your nearest Rilco office — no obligation, of course.



### RILCO LAMINATED PRODUCTS, INC.

W 843 First National Bank Building  
Saint Paul 1, Minnesota

District Offices: Newark, N. J., Fort Wayne, Ind., Tacoma, Wash.



"The home that Saint Paul built"  
Saint Paul Home Builders Association,  
John E. Bowman, executive director  
Designer: James H. Speckmann, Saint Paul  
Builder: Gordon Trepp, South Saint Paul



Rilco ridge beam 33' 6" x 5 1/4" x 13",  
Laminated lookouts 7' x 3-7/16" x 8 1/8",  
Rilco Fir Deck

## Publications

### How to specify lighting

New edition of Westinghouse's "Lighting Handbook" is now available. This 250-page manual is a comprehensive coverage of modern lighting practices. It includes: the electro-magnetic spectrum, distribution and light measurement, new light sources, co-efficients of utilization and maintenance factors, footcandle tables, etc. It also includes chapters on interior wiring, school and office lighting, store lighting, industrial and architectural lighting, floodlighting, street and sign lighting, germicidal and sun lamps, lighting costs. \$3.

Westinghouse, Bloomfield, NJ.

For copy, write direct to the manufacturer



### Guide to wood cabinetry

This trade association publication gives the basic information about cabinets for all parts of the house. It includes a discussion of the kinds of woods used, structure and design details, and illustrations of the specialized cabinetry for each area. Specifications for standard, medium, and premium grade, finishing specs, and a suggested specification form complete the booklet. \$2.

Southern Calif Assn of Cabinet Manufacturers, Los Angeles.

For copy, write direct to the manufacturer

### How to specify aluminum windows

Complete technical data is included in Vampco's "Aluminum Windows for Light Construction." Line covers casement, glass block, basement, awning windows in all sizes. Operator and hanging details are shown in working drawings.

Valley Metal Prods Co, Plainwell, Mich.

For copy, check no. 64 on coupon, p 214

### Film shows roof-deck design

A new color movie from the Perlite Institute shows numerous examples of concrete roof decks in current architecture, as well as construction details of decks made over formboard systems, steel decking, paper-backed wire mesh, and metal lath.

Perlite Institute, New York City.

For showing, write direct to the institute

### Pine for roofs and floors

Southern Pine Assn's bulletin no. 11 gives the basic design and technical information on the use of wood roof decking and heavy timber flooring. It is planned to help architects and builders specify roof decking in plank and beam construction in residential and commercial building, heavy flooring in industrial building. It includes a breakdown of insulation values, a grade-use guide, and tabulated data on suitable southern pine grades.

Southern Pine Assn, New Orleans.

For copy, check no. 65 on coupon, p 214

continued on p 208





**NATIONAL LOCKset®  
NEWS**

# Builders:

CASH IN ON THIS

# SUMMER SPECIAL

**NOW...INSTALL NATIONAL  
LOCKSET WITH 5" BACKSET  
AT NO ADDITIONAL COST**

NOW order NATIONAL LOCKset with 5" backset . . . at the regular 2 $\frac{3}{8}$ " backset price. Save \$1.20 on every 5" lockset you buy! Place an ample order for your summer and fall requirements. This special, limited offer expires October 15, 1958.



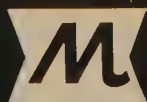
**Decorative trim on interior  
doors increases the value  
of the homes you build**

NATIONAL LOCKset enables you to install auxiliary trim on interior doors . . . at no premium lockset price, other than cost of the decorative escutcheon. Here's a real opportunity to add more beauty, value and "sellability" throughout the homes you build. See your dealer who handles Medalist hardware NOW. Install it with pride.

**SPECIAL OFFER . . .**

Ask your dealer about special offer on combination 2 $\frac{3}{8}$ " — 5" backset jig.

**TIME IS LIMITED**



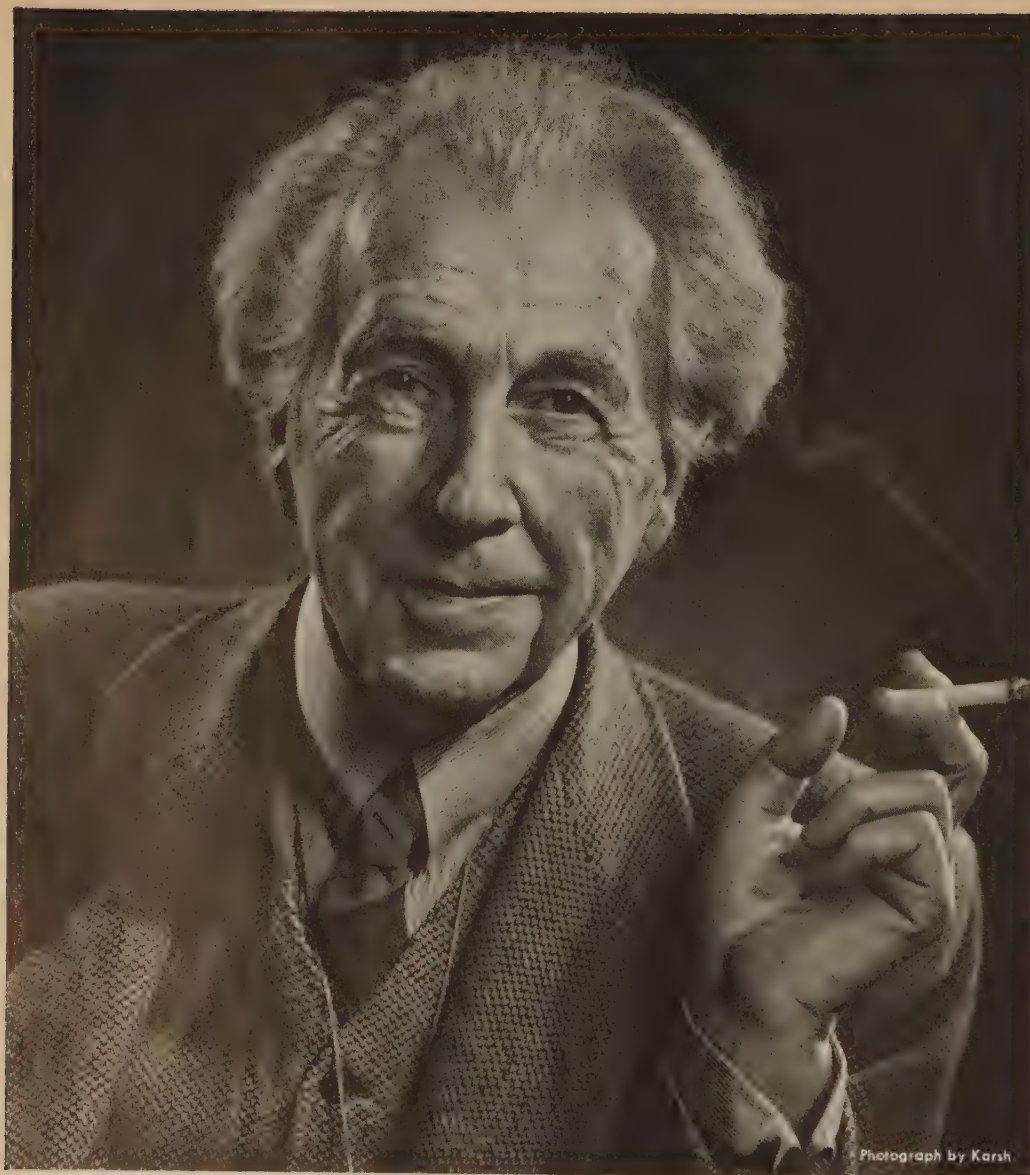
Specify it with confidence . . . Install it with pride

**MEDALIST HARDWARE DIVISION**

NATIONAL LOCK COMPANY

ROCKFORD, ILLINOIS





## "I think the only effective photograph that can be made of architecture is three dimensional"

"In the kind of architecture I represent, it's the third dimension—depth—that gives it quality and effect. And stereo photography is the *only* way you can get that third dimension," says world-famous architect Frank Lloyd Wright.

"Now it is possible to get a photograph of a building that gives you a feeling of being *in* that building."

**Realism of Realist stereo—a strong sales aid.** Regardless of what phase of construction you are in, Realist stereo can be a valuable sales tool.

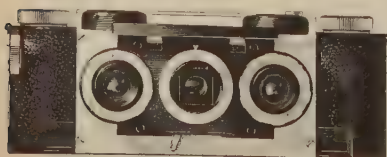
The natural colors and depth of Realist stereo slides show buildings, remodeling or decorating handiwork with life-like real-

ism—hold the undivided attention of prospective client or buyer.

A Realist stereo camera and hand viewer are all the equipment you need to put this effective sales aid to work for you.

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Realist F:35 Stereo Camera \$129

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A subsidiary of the David White Instrument Company.

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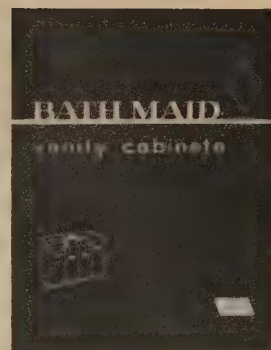
Please send me free copy of Realist stereo 3D booklet

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## Publications



### New vanity cabinet brochure

Bath Maid's new catalog shows 16 basic cabinet units with representative combinations. Models accommodate most major lavatory brands, also include accessory cabinets, efficiency cabinets, laundry hamper, all drawer cabinet, vanity unit.

Bath Maid, Inc. Andrews, Ind.

For copy, check no. 66 on coupon, p 214

### Remote control switching manual

The basic information necessary to plan and use Remcon's system of remote control switching is included in a new 24-page "Electrician's Manual." The book tells how the system works electrically, how the components go together, and gives specific installation instructions.

Pyramid Instrument, Lynbrook, NY.

For copy, check no. 67 on coupon, p 214

### Low-voltage switching brochure

Touch-Plate's booklet gives architect's specifications, data on how to plan and install the system, tips on trouble shooting, and a catalog of the complete line of Touch-Plate equipment. 18 pages, four-color.

Touch-Plate Mfg. Long Beach, Calif.

For copy, check no. 68 on coupon, p 214

### Ideas for home lighting

This 16-page booklet spells out Moe Light's Certified Inspiration Lighting, a program designed to satisfy the needs of comfort, convenience, safety, protection, and dramatic impression in all areas for all activities in the house. Many photographed lighting situations.

Thomas Industries, Louisville, Ky.

For copy, check no. 69 on coupon, p 214

### Bathroom color guide

Kohler of Kohler has just published a color chip folder of its fixture colors. Fixture colors are tied in with many suggestions for color combinations to go with Kohler fixtures.

Kohler, Kohler, Wis.

For copy, check no. 70 on coupon, p 214

### Engineering data on air diffusion

All performance tables and installation details are included in the new Titus catalog of square and rectangular diffusers. Catalog also includes full TMD line and instructions as to how to specify and order.

Titus Mfg Corp, Waterloo, Iowa.

For copy, check no. 71 on coupon, p 214

### Full line of incandescent lighting

All types of incandescent fixtures are included in the 56-page catalog of the Jay Lighting Co—over 300 fixtures in all. Styles are modern and traditional; finishes brass, wood, crystal, iron, antique.

Jay Lighting Co, Brooklyn.

For copy, check no. 72 on coupon, p 214

continued on p 210

HOUSE & HOME.



now an aluminum window

## DESIGNED FOR AIR-CONDITIONED HOMES



### PROVEN 66% BETTER THAN RECOGNIZED AIR INFILTRATION STANDARDS

To gain real savings in air conditioning and heating operations you want to use a truly weather-tight window. All Watson windows feature thick wool pile weather-stripping, vinyl glazing and rugged aluminum design which make them 66% better than recognized standards as proven by actual air infiltration

tests by a Texas College. Precision engineered of troublefree aluminum . . . adapted to brick, frame or masonry construction . . . come glazed and ready to install—Watson windows, in a variety of styles and sizes, are guaranteed 5 years. See SWEETS or write today for complete catalog!

**Watson**

RUGGED ALUMINUM

**WINDOWS**

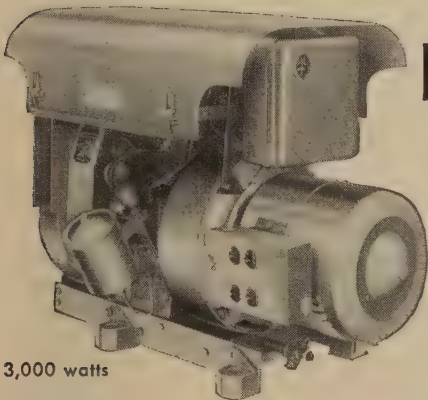
W. M. PRODUCTS CO.

5425 Blossom, Houston 7, Texas

**Gnan**  
ELECTRIC PLANTS

**ELECTRIC PLANT  
NEWS**

**Gnan**  
ELECTRIC PLANTS



3,000 watts

## New Onan Diesel Electric Plant

**Lower fuel cost, less maintenance, longer life, cut power generation costs with the Onan 3DSL to half that of small gasoline-powered electric plants!** This new unit gives you unmatched economy and season after season of service.

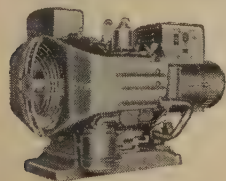
### Lighter weight and compact

The new 3DSL is powered by an Onan single-cylinder, air-cooled full-Diesel engine. Available in all standard A. C.

voltages. Vacu-Flo cooling, permitting enclosed installations, is standard. The 3DSL has a new mounted muffler, more efficient dry-type air filter, new geared crank, and it's hooded for protection on the job. Smoother running, lighter weight, and compact.

New lower price makes it an even bigger value . . . allows you to "go Diesel" for more power generation needs.

Onan A.C. gasoline-powered plants: Air-cooled, 500 to 10,000 watts. Water-cooled, 10 to 150 KW.



### 2-cylinder, 5KW ONAN DIESEL

**SERIES 5DRP.** Air-cooled horizontally - opposed, smooth-running full Diesel engine. All standard voltages available.

See your Onan distributor or write for information

**D. W. ONAN & SONS INC.**

3154A University Ave. S.E., Minneapolis 14, Minnesota

ELECTRIC PLANTS • AIR-COOLED ENGINES • KAB KOOLER • GENERATORS

**Gnan**  
ELECTRIC PLANTS

**ALUMILITED**

for  
beauty  
and  
long life

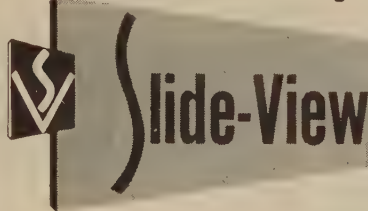


The overall alumilited finish on Slide-View sliding glass doors combines the beauty of satin aluminum and the durability of a diamond-hard surface.

Complete alumiliting, according to builders and architects, is another important reason why Slide-View leads in quality and value.

Our 10<sup>th</sup> Year fabricating sliding glass doors exclusively.

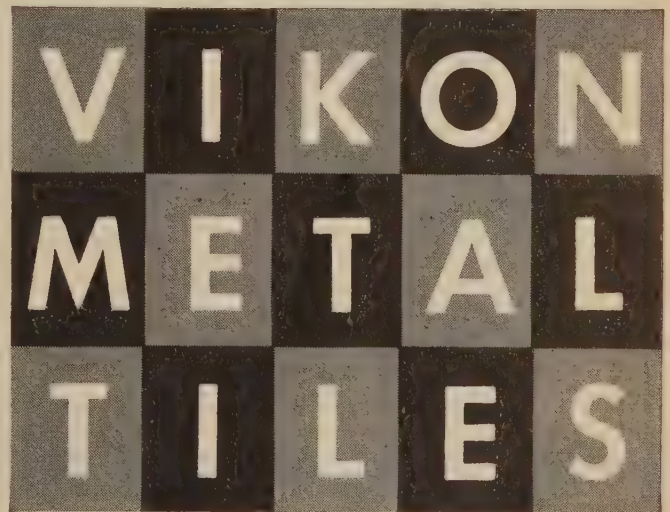
Write for brochure  
and prices



**DOOR AND WINDOW CO.**

P.O. Box 409, El Monte, California

"BRINGS THE OUTSIDE INSIDE"



Vikron offers profit and customer satisfaction with metal wall tiles in 6 durable types. They are easy and economical to install and available in many colors and sizes. Their outstanding beauty will last indefinitely.

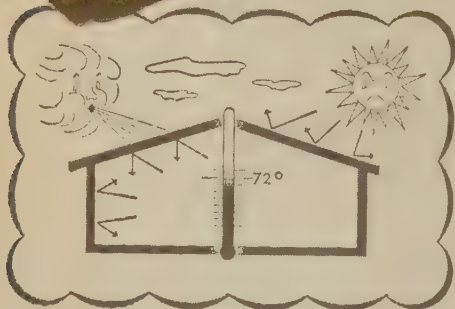
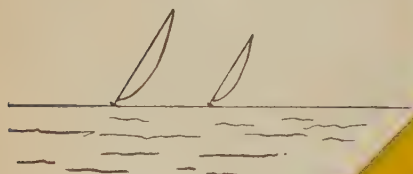
**WRITE TODAY** for our complete catalogue. Dealer inquiries are invited.

**VIKON TILE CORPORATION**  
Washington, N. J.

PORCELAIN ON ALUMINUM • ENAMELED CHROMATIZED STEEL  
ENAMELED ALUMINUM • STAINLESS STEEL  
COPPER • BRASS



# THE COATING IS MOST IMPORTANT



Prevent household  
sunburn and  
frostbite with

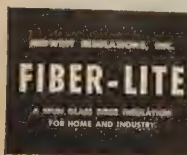
**\*REFLECT-O-RAY**

Yes, you can get burned a-plenty if the coating isn't right. Wise builders don't gamble with the trickeries of weather — they safeguard against a blistering sun or blustery blizzard by installing insulations faced with REFLECT-O-RAY. Coated with millions of sparkling aluminum flakes, it protects as it reflects—bouncing summer's sun back towards its source and arresting

the escape of winter's household heat. No stopped-up circulation either, for REFLECT-O-RAY just breathes continuously to prevent any damaging condensation build-up. Stop playing havoc with home owners' comfort — Install insulations faced with climate soothing REFLECT-O-RAY, so he'll live indoors contentedly. Ask your dealer for the brand names trade-marked below.

\*REFLECTIVE "BREATHER" SHEET FACING

FOR INSULATION BLANKETS AND BATTS UTILIZING  
ON THESE AND OTHER FAMOUS BRAND INSULATIONS:



REFLECT-O-RAY is an Aluminum Pigmented product of  
**THE APPLETON COATED PAPER COMPANY**  
APPLETON, WISCONSIN

## Publications

### How to use walnut

A 16-page four color display of the architectural use of walnut has recently been released by the manufacturers' association. Home uses shown include dens, living rooms, kitchens, family rooms, for floors and walls.

American Walnut Manufacturers' Assn, Chicago.

For copy, check no. 73 on coupon, p 214

### How to apply asbestos-cement

This 12-page booklet tells how to apply, cut, handle, and store flat asbestos-cement sheets, includes discussion of available types and designs, accessory and materials, special tools, job planning and preparation. Illustrated with detail drawings.

Asbestos-Cement Prods, New York City.

For copy, check no. 74 on coupon, p 214

### ... and how to paint it

A second booklet by the asbestos-cement trade association gives detailed instructions for painting the product: how to prepare the surface, how to pick a paint, special handling of A-C siding, shingles, flat and corrugated sheets.

Asbestos-Cement Prods, New York City.

For copy, check no. 75 on coupon, p 214

### Technical data on copper plumbing

Nibco, Inc, has just issued a 36-page catalog of copper drainage fittings for DWV and types L, M, and K copper tube. The catalog shows a properly designed drainage system, two basic types of systems, three trap types. Also included: step by step installation, cost and time comparisons, glossary of plumbing terms, and tables and charts to guide spec writing.

Nibco, Inc, Elkhart, Ind.

For copy, check no. 76 on coupon, p 214

### K&M's panels and pipes

"The House that A-C Built" shows how various forms of asbestos-cement panels were used in a modern, medium-priced house in Pennsylvania. The second folder describes a new K&M fluid-tight sewer pipe coupling.

Keasbey & Mattison, Ambler, Pa.

For copy, check no. 77 on coupon, p 214

### Why buy nylon carpeting

Industrial Rayon Corp answers this question in a 16-page booklet aimed at educating your customers. The booklet shows comparative wear in cross section photos and in the results of tests for texture retention, crush recovery, cleanability, and other characteristics.

Industrial Rayon Corp, New York City.

For copy, check no. 78 on coupon, p 214

### Everything but the pool itself

That's what is included in the 52-page catalog of Modern Swimming Pool Co: appliances, brushes, chemicals, chlorinators, cleaners, couplings, covers, diving boards, filters, fittings, ladders, lifeguard chairs, observation windows, paints, pumps, railings, testing equipment, underwater lights, vacuum cleaners. There is also a supplement on the care and maintenance of pools.

Modern Swimming Pool Co, White Plains, NY.

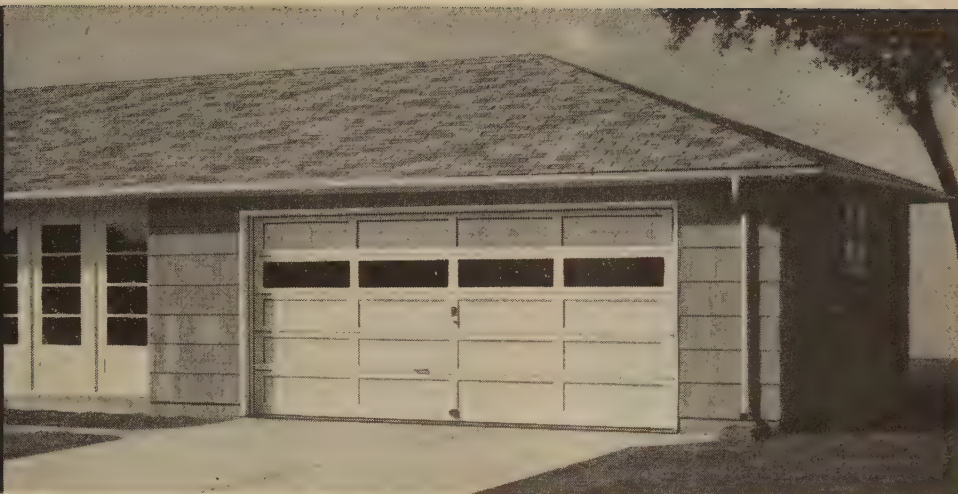
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continued on p 212

HOUSE & HOME



You asked for it...  
here it is!



## THE NEW Rō-WAY *Westchester*



A fine quality,  
low-cost  
2-car  
garage door

Ever since we introduced our budget-priced *Westchester* door for one-car garages, builders everywhere have asked for a similar model to fit two-car openings. So here it is . . . a good looking, fine quality door, and a value we think can't be beat.

In this new door you get the popular *Westchester* design . . . the same carefully engineered construction. You get even heavier, stronger corner brackets and edge hinges . . . angle iron reinforcement of horizontal tracks . . . three steel stiffeners attached to sections.

And, of course, such famous Ro-Way features as Taper-Tite track and Seal-A-Matic hinges for instant opening, tight closing . . . four Power-Metered extension springs for easy action . . . ball bearing rollers for quiet operation . . . Parkerized and painted hardware for double rust prevention . . . Ro-Way quality construction throughout.

And all this at exceptionally low cost. See your nearest Ro-Way distributor for full details.

**Model 80 Electric Operator.** Outstandingly reliable. Ideal for 2-car doors. Available with electronic control for operation from instrument panel of car. Write for details.

**ROWE MANUFACTURING CO., 1195 HOLTON ST., GALESBURG, ILL.**

### ONLY A GARAGE OFFERS:

Complete protection  
Extra storage space  
Finished appearance  
An extra room



*there's a Ro-Way for every Doorway!*

RESIDENTIAL • COMMERCIAL • INDUSTRIAL

**Rō-Way**  
OVERHEAD TYPE  
DOORS



# REVCO

## Bilt-In Refrigeration



Architects: Miller, Royer and Kite, Beverly Hills, Calif.

### Symbol of elegance in fast-selling, fine homes

The flexibility and classic beauty of Revco Bilt-Ins open new horizons in design. Distinctive finishes include stainless steel, copper-glo, 28 custom colors and matching wood panel doors. Standard 3-foot modular refrigerators and freezers may be built in almost anywhere . . . singly or in combination, over and under or side by side. In any arrangement, Revco units are the easiest built-ins to install! Leading kitchen manufacturers prefabricate cabinets for Revco Bilt-Ins, or cabinets may be custom built to specifications furnished. These are the reasons why Revco is the unquestioned leader in the built-in refrigeration field.

NOW! Years ahead

*Gourmet*



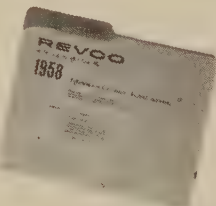
The new Revco Gourmet refrigerator achieves exclusive cooling efficiency. Chilled, purified air gently circulates throughout the entire food compartment. Constant temperature is maintained automatically and is precisely controlled at settings from 32 to 45 degrees, to preserve foods at their peak of flavor and freshness.

# REVCO

Setting trends in refrigeration since 1938.

Send for your free copy of

"ARCHITECT'S INFORMATION FILE" today!



REVCO, Inc., Deerfield, Mich., Dept. HH-98

Please send me the complete Architect's Information File on Revco Bilt-In Refrigerators and Freezers.

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Firm \_\_\_\_\_

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City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

## Publications

### Wall chart converts measurements

A reference table for quickly converting from one scale of measurement to another is yours for the asking from Precision Equipment Co. Not only does it relate the English to the metric system but gives such uncommon conversions as: atmospheres to kgs sq cm, cm per sec to mph, cu ft to liters, microns to meters, quintal to pounds, etc.

Precision Equipment Co, Chicago.

For copy, check no. 80 on coupon, p 214

### Data on earth moving equipment

Recent releases from Ottawa Steel detail the specifications of new truck and tractor mounted back hoes and front end loaders. Truck mounted hoe goes on or off Chevrolet chassis in 5 minutes. Tractor mounted equipment fits most wheeled or crawler models.

Young Spring & Wire, Ottawa, Kans.

For copy, check no. 81 on coupon, p 214

### Prescolite lighting fixtures

Construction details and installation data are included in the new 36-page Prescolite catalog. Recessed and surface mounted built-in fixtures get major attention though booklet also includes portable and pin-up types, exit and aisle lights, etc.

Prescolite, Berkeley, Calif.

For copy, check no. 82 on coupon, p 214

### Specs for metal doors, windows

Lupton's 40-page 1958 catalog gives full technical data on their steel and aluminum windows and doors for residential, commercial, and industrial use. Scale drawings show construction and installation details. Specifications list details of materials, construction, glazing, weatherstripping, hardware, screws, and finish.

Michael Flynn Mfg Co, Philadelphia.

For copy, check no. 83 on coupon, p 214

### Data on Case power equipment

Eight new publications tell the story of J I Case trenching, loading, and dozing machines plus a large selection of specialized attachments and a new 5-ton tilt-bed trailer that is offered at a saving with purchase of a new Case machine.

J I Case Co, Racine, Wis.

For copy, check no. 84 on coupon, p 214

### How to use corrugated Transite

J-M has a new 32-page booklet listing all the properties and characteristics of its corrugated asbestos-cement board; showing how it can be handled, worked, installed; how it can be used with various building methods and combined with various building materials. Illustrated with photographs and detail drawings.

Johns-Manville, New York City.

For copy, check no. 85 on coupon, p 214

### To sell central air conditioning

Minneapolis-Honeywell has prepared a 24-page pamphlet of questions and answers on built-in air conditioning systems in cooperation with Armstrong Furnace Co. The booklet is aimed at the consumer to help builders sell more year-round conditioning. Besides selling the advantages, the booklet discusses sizes, types, costs, and temperature controls.

Armstrong Furnace Co, Columbus.

For copy, check no. 86 on coupon, p 214

## recommended practice

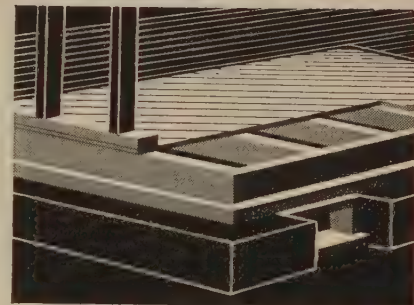
for termite and decay resistant design

# Wolmanized

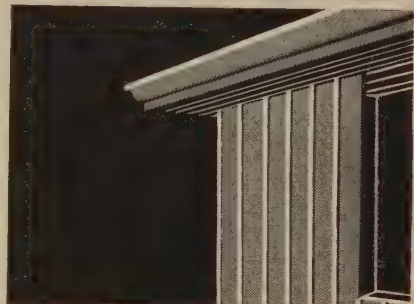
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PRESSURE-TREATED LUMBER



Plates and Studs on Slab



Sills, Joists, Subfloor over crawl space or basement



Gutter, Fascia, Board and Batten Siding

Wood can remain your most versatile and economical material for residential, commercial and institutional construction even in areas of termite infestation—or where conditions are conducive to decay . . . If you specify Wolmanized pressure-treated lumber.

Wolmanized treated lumber, plywood and laminated timbers are chemically protected against insect and fungi attack and remain clean, paintable and easy to handle.

The cost? Less than 2% of the total in houses . . . even lower in other buildings!

Wolmanized Preservative Department, Koppers Company, Inc.  
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Please send me 16-page booklet on Wolmanized pressure-treated lumber in light and heavy construction.

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**Wolmanized® Lumber**

continued on p 214





**SALES FEATURE:  
A WIND-SAFE ROOF**

*Warranted  
in Writing!*

The exclusive Ruberoid Wind Warranty covers every Lok-Tab asphalt shingle against blow-offs—even in hurricanes and cyclones! Each shingle is secured by a hidden lock *from the moment it is put on*. And you get a written warranty against wind damage on every house you build. Lok-Tabs reduce building costs, too: fewer shingles per square . . . fewer nails . . . self-aligning . . . less labor. Ask your Ruberoid dealer about Lok-Tabs. For more information, ask for LOK-TAB Folder # 1364. Write The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.

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**LOK-TABS**  
**ASPHALT SHINGLES**

**The RUBEROID Co.**

**ASPHALT AND ASBESTOS  
BUILDING MATERIALS**



# Trouble-Free Stain Finishes

choice of leading  
builders  
**COAST TO COAST**

"... we have been extremely gratified with Cabot's Stains."

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Luria Brothers, Inc.  
Arlington, Virginia.



"... more architects specify Cabot's than any other stains combined."

J. Jerold Norman,  
Norman Builders,  
Portland, Oregon

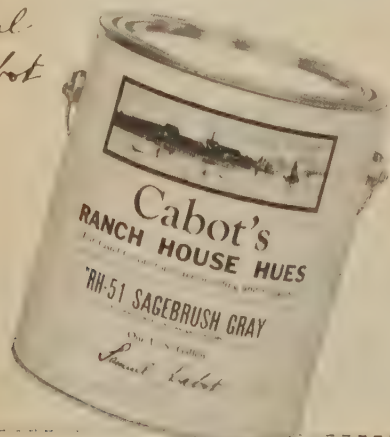


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### Protect, Preserve, Beautify

- For shingles, siding and clapboards, ideal for any type of wood.
- Cost 1/2 as much as paint ... wear equally well.
- No priming or thinning ... no scraping or sanding.
- Will not crack, peel, or blister.
- Easy to apply and maintain ...
- Penetrate deeply, actually dye the wood fibres.
- 18 Appealing colors.

Samuel  
Cabot



### SAMUEL CABOT INC.

930 Oliver Building, Boston 9, Mass.

Please send color card on Cabot's Ranch House Hues  
— including complete Architectural Specifications.

## Publications

### Polystyrene insulation

How to use Uni-Crest, a new foamed styrene insulation, is detailed in a new publication in folder form by its maker, United Cork Co. The heavy paper folder tells the general story of the material; specifications inserts give the technical data needed for its efficient use.

United Cork Co, Kearny, NJ.

For copy, check no. 87 on coupon below

### Data on lightweight concrete

New data from Zonolite tells how to use this lightweight insulating concrete over asbestos-cement formboards, insulating and acoustical formboards, fiberglass form-

boards, paperbacked wire lath, structural concrete decks (1:6 and 1:8 mixes), vented galvanized steel decks (1:6 and 1:8 mixes), and as precast roof deck.

Zonolite Co, Chicago.

For copy, check no. 88 on coupon below

### Color chart for vinyl asbestos tile

A guide to the latest model numbers of eight major tile manufacturers—Armstrong, Azrock, Bonafide, Gold Seal, Goodrich, Johns-Manville, Kentile, Tile-Tex—is available from the association. Asphalt & Vinyl Asbestos Tile Institute, New York City.

For copy, check no. 89 on coupon below

## Want more information?

The numbers below are keyed to the items described on the New Products and Publications pages. Check the ones that interest you and mail the coupon to:

### House & Home

Room 1021A, 9 Rockefeller Plaza, New York 20, N. Y.

### NEW PRODUCTS

- ☐ Rusco Twin Window
- ☐ Fleetlite double sliding windows
- ☐ Textured blinds from Vertical Blind Corp
- ☐ Scotch-Tred 3M's
- ☐ Birge stainproof wall covering
- ☐ Textured blinds from Vertical Blind Corp.
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- ☐ Snellstrom textured plywood
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- ☐ Johns-Manville Micro-Flex-board
- ☐ Crane bathroom fixtures
- ☐ Kohler lavatory hanger
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- ☐ National Fiberglass shower stall
- ☐ Flex-arm coiled shower head
- ☐ Moen one-hand shower control
- ☐ Landia prefabricated shelving
- ☐ Strong-Tie framing anchor
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- ☐ Thermador refrigerator-freezer
- ☐ Chambers refrigerator-freezer
- ☐ Metropolitan's prefab greenhouse
- ☐ Vampeco entrance door components
- ☐ Handgard disposable gloves
- ☐ Thermo-Rite firescreen
- ☐ Leigh aluminum roof jack
- ☐ Ador budget glass door
- ☐ Sferics electronic storm warning
- ☐ Allied urethane foam insulation
- ☐ Rubatex pipe insulation
- ☐ Cascade's package pool
- ☐ Rolite contact cement
- ☐ Maine Mfg cabinets
- ☐ Circle-Air wall heaters
- ☐ Wizard TV coupler
- ☐ Meier plug-in heaters

- ☐ Kinnard's sure-fit tank ball
- ☐ Eveready flood-protection
- ☐ National economy disposer
- ☐ Owens-Corning duct liner
- ☐ Leigh Products ventilators
- ☐ Du-Air blower

### PUBLICATIONS

- ☐ Uses for epoxy resins
- ☐ Georgia-Pacific plywood paneling
- ☐ Where to specify latex paint
- ☐ "Facts about dehumidification"
- ☐ Decorating with Micarta
- ☐ "How to sell homes faster"
- ☐ Arcadia window catalog
- ☐ Government specs for adhesives
- ☐ Cedar house brochure
- ☐ Insulation factor chart
- ☐ Fire ratings for structural elements
- ☐ "Aluminum windows for light construction"
- ☐ Pine for roofs and floors
- ☐ Bath Maid vanity catalog
- ☐ Remcon switching manual
- ☐ Touch-Plate system brochure
- ☐ Moe Light booklet
- ☐ Kohler bathroom colors
- ☐ Titus air diffusion guide
- ☐ Jay lighting catalog
- ☐ How to use walnut
- ☐ How to apply asbestos-cement sheets
- ☐ How to paint asbestos-cement sheets
- ☐ Nibco data on copper plumbing
- ☐ K & M asbestos-cement products
- ☐ Why buy nylon carpeting
- ☐ Modern Swimming Pool catalog
- ☐ Measurement conversion chart
- ☐ Ottawa earth moving equipment
- ☐ Prescolite lighting fixtures
- ☐ Lupton's doors and windows
- ☐ Case tractor data
- ☐ How to use corrugated Transite
- ☐ The story of central air conditioning
- ☐ Polystyrene insulation
- ☐ How to use Zonolite
- ☐ Vinyl asbestos color chart

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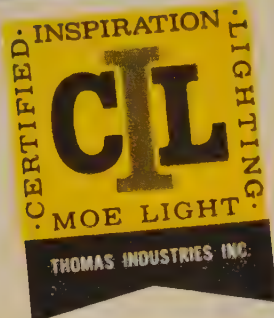
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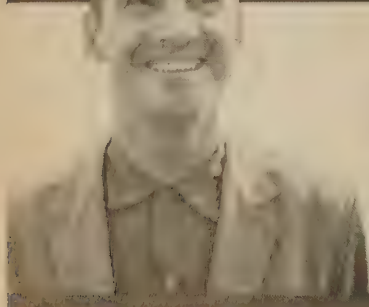
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# BUILDERS' CHOICE



**FRANK NOONAN**, Medallist Homes, Arlington Heights, Illinois: "We're in a highly competitive suburban market. In our homes, the beauty and quiet of Ceilings by Celotex typify what our prospects are looking for... the most for their money in new, modern features. HUSH-TONE Tile helps sell the whole house."



**LARRY CARRIER**, Carrier Construction Co., Bristol, Tenn.: "Our homes are in the \$12,500 to \$35,000 range. In our new subdivision, 100 homes in the \$12,500 to \$15,000 bracket will have a ceiling by Celotex because it suggests quality construction throughout. We find we can profitably install HUSH-TONE Tile in any price home."

# HUSH

## CEILING TILE

A visible quality extra, Ceilings of Hush-Tone Tile by Celotex are being featured more and more by leading builders everywhere.

"Beauty with the added **SELL of Quiet**" is the reason. Choose from two exclusive finishes: True White or color-flecked Fiesta. The patented Linear Random perforation pattern makes Hush-Tone Tile repaintable without loss of sound-absorption efficiency... these perforations won't clog!

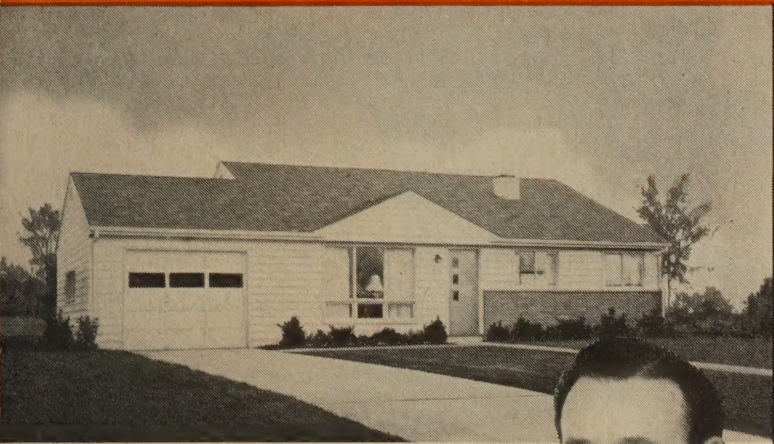
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**"SOUND-QUIETING CEILINGS BY CELOTEX!"**

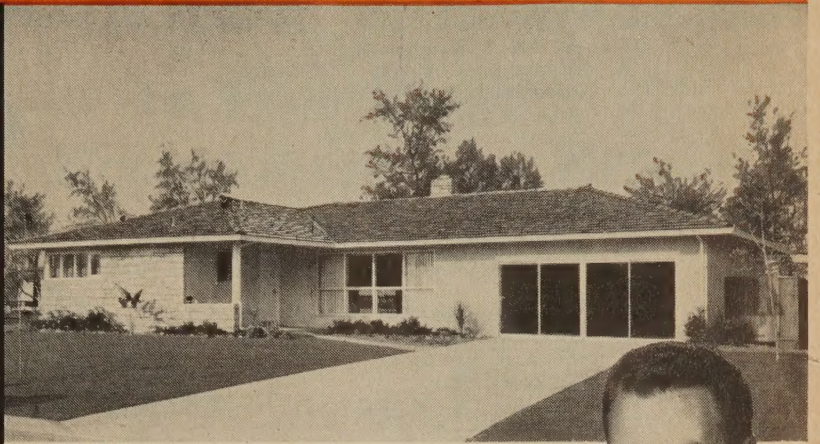




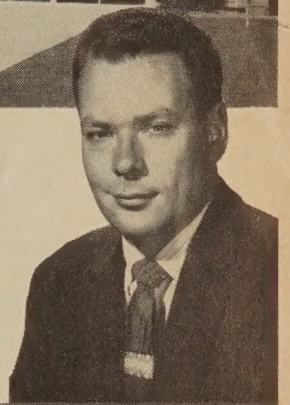
# ACROSS AMERICA!



**PAT COLANTONE**, Colantone Bros. Construction Co., Youngstown, Ohio: "I put a Fiesta ceiling in the recreation room of our model home. The realtor used this room as a major point in his sales talk. No doubt about it, there's sell in that Celotex name. He sold the model and four others to be started immediately!"



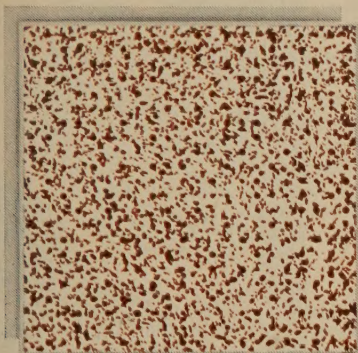
**HOWARD E. MOHR, JR.**, Mohr Homes, Campbell, California: "For the quality-built ranch homes in our Dry Creek Ranch development, HUSH-TONE gives us two exciting new talking points. Prospects notice the way it puts a hush on noise. The Fiesta pattern fits in perfectly with most any decorating scheme. Just right for our casual, Western family-style living!"



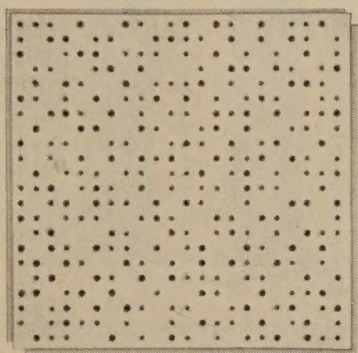
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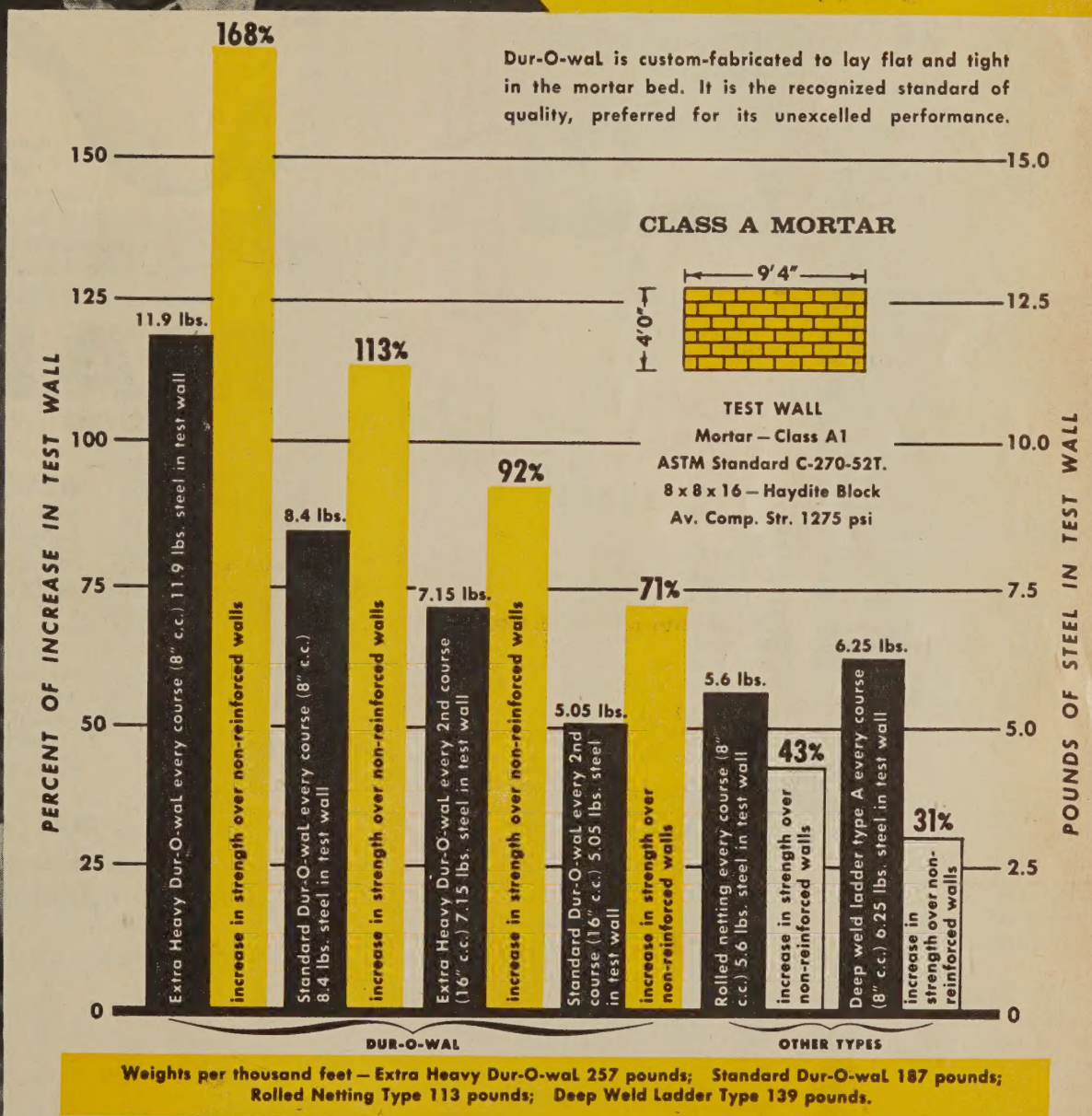
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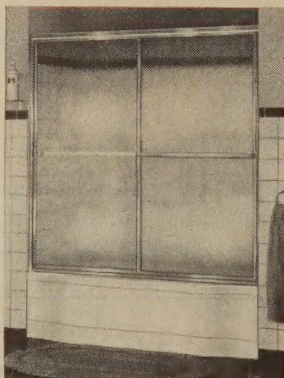


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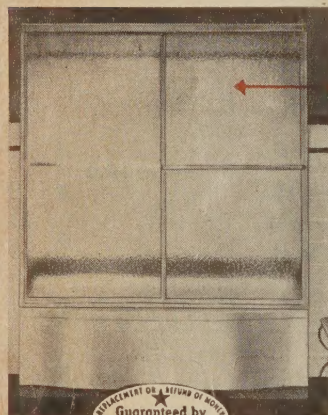


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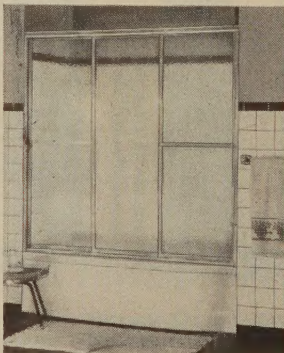
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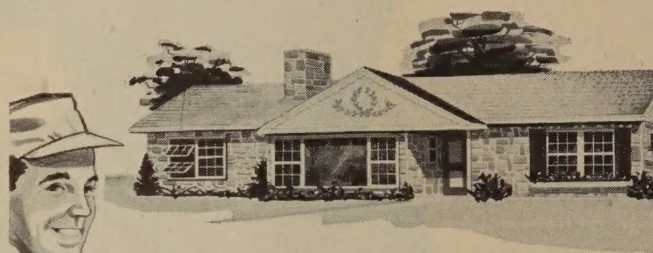
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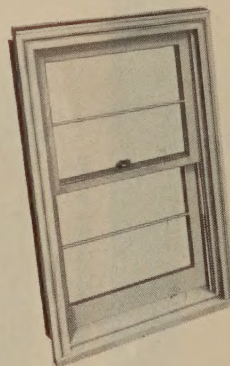


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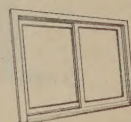


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precision-balanced window features a concealed balance system that permits finger-tip raising or lowering of sash. Upper and lower sash can be instantly removed and balance mechanism disengaged and re-engaged automatically. Malt-A-Magic is the answer to a better, more convenient double-hung window at an economical price. Full range of sizes and sash light variations.

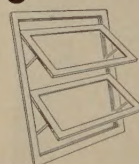
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